

TITANINE DOPE

FIRST AERO WEEKLY IN THE WORLD



OFFICIAL ORGAN OF THE ROYAL AERO CLUB OF THE UNITED KINGDOM.

o. 1071. (No. 27. VOL. XXI.) Registered at the General Post Office as a Newspaper.

JULY 4, 1929.

SIXPENCE WEEKLY.

“SINTONA” AEROPLANE LINEN FABRICS to BRITISH and FOREIGN SPECIFICATIONS.

Manufacturers : THOS. SINTON & Co., Ltd., Tandragee, Co. Armagh, N. Ireland.
Telegrams : Sinton, Tandragee.

Selling Agents : J. W. GATES & Co., 133, Oxford Street, London, W.1.
Telegrams : Gates, London, Regent 1164. Telephone : Regent 1164.

“Fit and Forget” **K·L·G** Sparking Plugs

MALLITE PLYWOOD

Telephone:
BISHOPSGATE
5641
(4 lines).

USED BY THE LEADING AIRCRAFT MANUFACTURERS

THROUGHOUT THE WORLD.

Telegrams:
VICPLY
KINLAND
LONDON.

Manufactured to the BRITISH AIR MINISTRY SPECIFICATION, 2.V.3., by

THE AERONAUTICAL & PANEL PLYWOOD CO., LTD., 218-226 KINGSLAND ROAD, LONDON, E.2.

See the R.A.F. Display,
Hendon,
July 13

The Palmer Tyre Co., Ltd., 100-106, Cannon Street, London, E.C.4.



THE BRISTOL BULLDOG
SINGLE SEATER FIGHTER
EMBODIES IN THE STRUCTURE
THE RESULT OF TEN YEARS
EXPERIENCE OF METAL CON-
STRUCTION
THE HIGH TENSILE STEEL STRIP
SECTIONS ENSURE GREAT SAVING
OF WEIGHT, ABSOLUTE RIGIDITY,
EASE OF REPAIR AND SIMPLIFIED
ERECTION

STAND
104
INTERNATIONAL
AERO
EXHIBITION.

There is ample assurance of these claims in the fact that the Bristol "Bulldog" has been adopted by the Royal Air Force as standard equipment.

THE BRISTOL AEROPLANE COMPANY, LTD.,
FILTON — BRISTOL.

Telephone—3906 Bristol.

Telegrams—"Aviation, Bristol."

Kindly mention "Flight" when corresponding with advertisers.



★ **RADIATORS FOR AERO ENGINES**

WE made thousands of Aeroplane Radiators of all types for the Army and Navy during the war. Under control of the Air Ministry we were known as the National Aircraft Radiator Factory. We have an extensive and up-to-date plant for drawing Aeroplane Tubes of any length or design, and our experience of Radiator manufacturing covers a period of seventeen years.

"Numerous successes have been obtained by Aircraft using Patent Anderton Brown Tube Radiators as manufactured and supplied by Serck Radiators, Limited."

SERCK RADIATORS, LTD.,
Warwick Road, Great, Birmingham.

Telephone: Victoria 531.
Telegrams: "Serckrad, Birmingham."

SERCK H.P.

BRASS & COPPER TUBES

We can supply Brass and Copper Tubes of every design, in quantities, guaranteed perfect in every respect.



Brown Brothers Limited

have supplied Fittings and Accessories for Aircraft construction since the days of the earliest experiments of Col. Cody and Mr. A. V. Roe.

Epoch-making flights by Sir Alan Cobham, Mr. Bert Hinkler, Flt.-Lt. S. M. Webster and others, were made in machines fitted with parts supplied by us.

Stocks include: Aero Linen, Bolts and Nuts, A.G.S. Parts, Electrical Fittings, etc.

Aero Exhibition—Olympia. Stand No. 70.

**GREAT EASTERN STREET,
LONDON, E.C.2.**



FOR SAFETY'S SAKE

You cannot afford to use any but the finest quality rubber components. During the War, Luke Turner and Co., and Industrial Rubber Products Ltd., were pioneer manufacturers of aircraft rubber. Their very wide experience is at your disposal to-day.

Petrol Resisting Tube.	Rubber Buffers.
Shock Absorber Cord.	Moulded Rubber.
Shock Absorber Rings.	Water Hose.
	Pitot Tubing
	Steam Hose,
	Etc., etc.

Quotations gladly submitted
for every description of
AIRCRAFT RUBBER.

Our release notes authorised by A.I.D.
CONTRACTORS TO THE AIR MINISTRY.

INDUSTRIAL RUBBER MANUFACTURERS LTD
191-2 Tottenham Court Road,
London, W.C.

Save time by using the Air Mail.



The BRITISH way to—
FRANCE
SWITZERLAND
ITALY
GREECE
EGYPT
PALESTINE
IRAQ
PERSIA
INDIA
and the
FAR EAST

IMPERIAL AIRWAYS

AIRWAYS HOUSE
CHARLES ST. S.W.1

Telephone: REGENT 7861

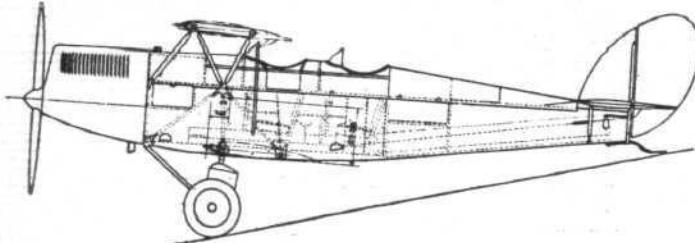
Telegrams: IMPAIRLIM

Ad. 406

GEORGE PARNALL & CO.,

*Aircraft Designers
and Constructors.*

SPECIALISTS IN
LIGHT AIRCRAFT.



PARNALL ELF

The new PARNALL "ELF" is a 2-seater Light Plane, now in the course of construction. It has many features that should make it an attractive proposition for Light Plane Clubs or the Owner Pilot.

One of these machines, fitted with a HERMES ENGINE, will be on view at the forthcoming

**INTERNATIONAL AERO EXHIBITION,
STAND 92.**

Full Particulars on Application to :

GEORGE PARNALL & CO.
COLISEUM WORKS, PARK ROW, BRISTOL.

'Phone: BRISTOL 4773.

'Grams: WARPLANES, BRISTOL.

LONDON OFFICE: Evelyn House, 62, Oxford St. 'Phone: Museum 7101.

YATE AERODROME.

'Phone: Chipping Sodbury 50.

GLOS.

'Grams: Warplanes, Yate.

ALUMINIUM CASTINGS

OF EVERY DESCRIPTION
FOR AIRCRAFT WORK.

Any Size—Any Quantity.

"COANALIUM"

A NON-CORROSIVE ALLOY
FOR MARINE & OUTDOOR WORK

PRICE	RIGHT
WORK	RIGHT
SO	
PLEASE	WRITE
TO	
APPROVED FIRM	



THE ALUMINIUM MAN
AERO SHOW, Stand No. 150.

ROBERT W. COAN Ltd.
THE ALUMINIUM FOUNDRIES,
COAN HOUSE, DUNCAN ST., N.1.



Branch Works:—219, GOSWELL RD., E.C.1.
TELEPHONE: CLERKENWELL 4466 (4 LINES).
TELEGRAMS: KRANKASES, NORDO, LONDON.

STRIP STEEL

*Specialists in the Rolling
and Heat Treatment of
Aircraft Strip and Sheet
Steel.*

TO AIRBOARD SPECIFICATIONS.

*Deep Drawing Steel
for all kinds of Presswork.*

**J. J. HABERSHON & SONS, Ltd.,
HOLMES MILLS, ROTHERHAM.**

'Phone: ROTHERHAM 569 (4 lines). T. A.: "HABERSHON SONS, ROTHERHAM."

Kindly mention "Flight" when corresponding with advertisers.



SAUNDERS FLYING BOATS

S. E. SAUNDERS, LTD.
BUSH HOUSE, ALDWYCH,
LONDON W.C.2
& EAST COWES, I.O.W.

*British
and best.*

CONTRACTORS TO THE
AIR MINISTRY, THE WAR
OFFICE, THE ADMIRALTY,
CROWN AGENTS & R.N.L.I.

Air Press Agency.

Save time by using the Air Mail.

DOPED WITH



Simmonds
"Cirrus Spartan."

CELLON

The dope of proved efficiency.

Visit the
R.A.F. DISPLAY
at Hendon,
Saturday, July 13.

International
Aero Exhibition
STAND No. 23,
July 16—27th.

Cellon Dope meets all requirements—it is used for Service Machines, Civil Air Lines and light Aeroplanes, a fine example of which is shown above.

"Spartans," built by Simmonds Aircraft, Ltd., are used in many foreign countries, and they are always, of course, doped with CELLON, which gives unvarying satisfaction under the most varying conditions.

Cerric Cellulose Lacquers comply with D.T.D. Specifications for metal parts, cockpits, propellers. Particulars on application.

CELLON, LTD., Upper Ham Road, KINGSTON-ON-THAMES.
(Contractors to H.M. and Foreign Governments.)

Telephone :
Kingston 6061 (5 lines).

Telegrams :
"AJAWB, Phone, Kingston-on-Thames."



Kindly mention "Flight" when corresponding with advertisers.

FLIGHT

The
AIRCRAFT
ENGINEER
&
AIRSHIPS

First Aeronautical Weekly in the World. Founded January, 1909

Founder and Editor: STANLEY SPOONER

A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport

OFFICIAL ORGAN OF THE ROYAL AERO CLUB OF THE UNITED KINGDOM

No. 1071. (No. 27. Vol. XXI.)

JULY 4, 1929

[Weekly, Price 6d.
Post free, 7d.]

Editorial Offices: 36, GREAT QUEEN STREET, KINGSWAY, W.C.2
Telephone: Holborn 3211. Telegrams: Truditur, Westcent, London.

Annual Subscription Rates, Post Free.

United Kingdom ... 30s. 4d. Abroad ... 33s. 0d.*

* Foreign subscriptions must be remitted in British currency

CONTENTS

Editorial Comment:	PAGE
King's Cup Race	531
Rotterdam	532
King's Cup Air Race and Siddeley Trophy Tour	533
Rotterdam Meeting	541
Private Flying: London to China by Light Plane	545
Light 'Plane Clubs	546
Civil Aviation Coupe Light Plane	548
Airisms From the Four Winds	549
Across America on a "Cirrus-Avian"	551
Cambridge University Air Squadron	552
Cross-Channel Enquiry	554
Eddies	555
New York to be a Seaplane Port	556
Royal Air Force	557
Personals	558

EDITORIAL COMMENT



UT of an entries list of 60 machines it appears unlikely that more than about 42 will face the starter on Friday of this week, when the biggest British air race of the year, that for the Challenge Cup presented by His Majesty The King, starts from Heston aerodrome. Among the 20 or so "absentees" there will probably be found at least 40 reasons for their non-participation, but from what can be gathered at the time of going to press with this week's issue of FLIGHT, by far the majority will

King's Cup Race be out of the race due to having failed to obtain their Certificates of Airworthiness in time. Many of the missing

machines are entirely new types, and one can understand the difficulties of getting them finished in time for the race. As quite a number of these new machines are private ventures, some with not over-much capital behind them, more or less amateur-built, and brought into being at tremendous personal exertion on the part of their owners, one cannot help sympathising very sincerely with them, but rules are rules, and it would obviously have been impossible for the Royal Aero Club to contemplate making concessions on the large scale which, it would seem, would have been necessary to get all the missing machines into the race. That there will be heartburnings is to be expected, and the race will naturally lose a good deal of its interest by the absence of "dark horses." However, one can only wish the unfortunate ones "better luck next time," and in any case a machine which is finished so shortly before a race as difficult as that for the King's Cup that the necessary formalities cannot be got through in time might perhaps better be out of the race. To cover nearly 1,200 miles in two days' flying is not a task for untried machines, and although one or two might get through, there is always a very good chance that many would not. And accidents are the last things we want during a Circuit-of-Britain race.

Elsewhere in this issue of FLIGHT we give a complete list of the entries for the King's Cup Race, with handicap allowances, times of starting from Heston

DIARY OF CURRENT AND FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in this list—

1929.

- July 5-6 ... King's Cup Race and Siddeley Trophy Tour.
- July 13 ... R.A.F. Display at Hendon.
- July 16-27 ... 7th International Aero Exhibition, Olympia.
- July 25 ... Bleriot Cross-Channel Flight Anniversary Fete, Calais.
- July 28 ... International Flying Meeting, Sweden.
- Aug. 1-14 ... French Light Plane Meeting, Orly.
- Aug. 15 ... International Balloon Race, Poland.
- Sept. 6-7 ... Schneider Trophy Race, Solent.
- Sept. 10-20 ... Aero Club de France Meeting, Le Baule.
- Oct. 1 ... Gordon-Bennett Balloon Race, St. Louis, U.S.A.
- Oct. 31 ... Guggenheim Safe-Aircraft Competition Closes.

and details relating to machines, engines, entrants and pilots. Our table cannot, unfortunately, include the times of starting from Blackpool on the morning of the second day (Saturday) as these times will not be known until Friday night, the time gained or lost by the various competitors on the first stage having to be added or subtracted before the order of starting from Blackpool can be determined. Nevertheless we have no doubt that our table, for the details of which we are indebted to the Royal Aero Club, will be found of very great interest, not merely because it shows the exact time of leaving Heston, so that those interested in a particular competitor may know exactly at what time he is due to leave, but also on account of the handicap allowances, about which there is bound to be heated arguments likely to keep many visitors to Heston pleasurable occupied while waiting for the scratch man to leave!

It will be noticed that the first man to leave will be Flight-Lieutenant Ashton, on the Halton H.A.C. "Minus" with Bristol "Cherub" engine. In view of the fact that the engine is of some 35 h.p. only, a handicap allowance of 4 hours on the first stage and a little less on the second does not seem too much, especially bearing in mind that a relatively slow machine is much more affected by adverse weather than is a fast. Ashton will be followed some 40 mins. later by the old Avro "Baby," which originally had a 40-h.p. Green engine, but which is now fitted with a "Cirrus I." Both machines are by way of being veterans, and all will wish them every possible success in a difficult race.

After that the types will follow in approximately the order: Moth X, Spartans, Widgeons, Gipsy-Moths, Grebes, and finally, as scratch man, Flying Officer Summers (who has been appointed chief test pilot to Vickers in succession to the late "Tiny" Scholefield) on the Vickers 141 with Rolls-Royce F engine. Mr. Summers will leave almost exactly at noon, and after that visitors to Heston may return home until

Saturday afternoon, when the winner is expected to cross the finishing line approximately at 4 p.m.

The distance to be covered on the first day is about 590 miles, and on the second day about 580 miles, so that the race will be a very searching test of reliability on the part of machines and engines, and of the endurance and navigational skill of the pilots. "May the best man win!"

❖ ❖ ❖

The second International Light 'Plane Meeting held at Rotterdam last week was yet another example of how such an event can be made an instrument for promoting goodwill between flying folk. The hospi-

Rotter-
dam

tality of the Dutch is something to be marvelled at, and at this year's meeting our Dutch hosts exceeded by far the expectations even of those of us who had sampled their hospitality previously. Competitors, officials, friends of competitors and officials, and apparently everyone connected with aviation, were housed under one roof, at the hotel Weimar, and there were the non-paying guests of the Rotterdam Aero Club. And non-paying meant non-paying. Everything was provided free, from meals and drinks to taxis. The Aero Club seemed to have bought Rotterdam for four days, and the only fly in the ointment which could possibly disturb the British visitor was the thought that some day he might be faced with the task of reciprocating all the friendliness and hospitality showered upon him. How he will manage to do so we personally fear to contemplate. That many friendships which will endure were formed between Dutch hosts and British guests we have not the slightest doubt. And on behalf of all British visitors we would extend our thanks to Mr. Kolff, President of the Rotterdam Aero Club, and Mr. de Niel, Hon. Sec. of the Club, and to all the others who made the four days in Rotterdam such an unforgettable experience.

❖ ❖ ❖ ❖

ORDER YOUR COPY!

1. **Next week's Issue of Flight.**—In addition to the usual features, with FLIGHT for July 11th there will be issued:—
2. **A Special Double-page Inset**, showing a modern passenger-carrying, dual-control, 3-engined monoplane, in part section, giving details of all main parts, controls, etc.
3. **The R.A.F. Display** at Hendon on July 13th will be fully dealt with; various types of aircraft taking part being given in full-page illustrations, etc.
4. **Olympia Aero Exhibition** (opening on Tuesday, July 16th). In this section will be found particulars of the British machines staged at Olympia, each with illustrated description and original sketches, after personal inspection by FLIGHT Editorial Staff.
5. **The King's Cup.**—Fully illustrated report of the King's Cup Race.

The charge for this issue (comprising some 200 pages), which goes free to all subscribers throughout the world, will be **1s.**

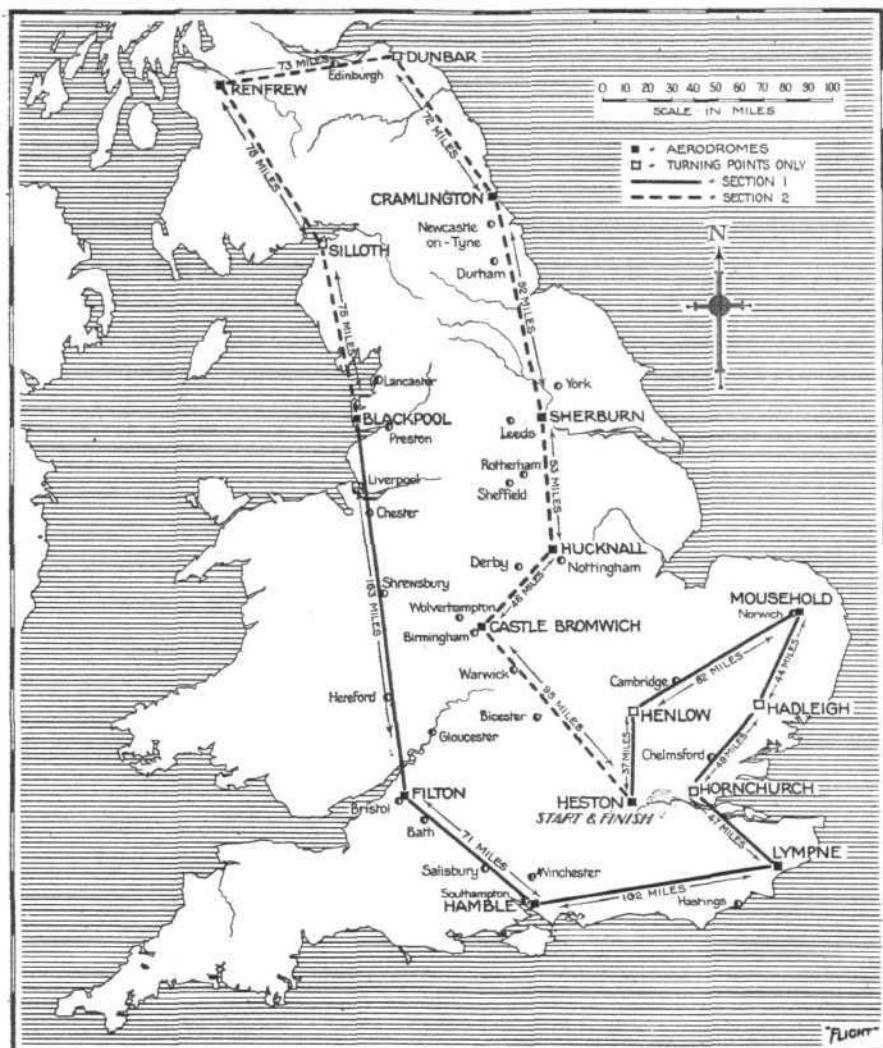
As it will be impossible to reprint, readers should see that they place their firm orders with their newsagents to ensure obtaining a copy.

THE KING'S CUP AIR RACE AND SIDDELEY TROPHY TOUR

WITH a record entry of 60 machines, this year's air race, the eighth, for the King's Cup, which takes place on Friday, July 5, and Saturday, July 6, should provide some good sport. As with last year's race, it takes the form of a circuit of Britain (like the first King's Cup Race of 1922), but over a course slightly longer—in all, 1,168 miles. Also, the circuit is divided into two daily sections, as follows:—Section 1 (July 5). London, Heston (Start); Henlow, Air Station (Turning point), 37 miles; Norwich, Mousehold Aerodrome (Stop), 82 miles; Hadleigh Aerodrome (Turning point), 44 miles; Hornchurch, Air Station (Turning point), 49 miles; Lympne Aerodrome (Stop), 47 miles; Hamble Aerodrome (Stop), 102 miles; Bristol, Filton Aerodrome (Stop), 71 miles; Blackpool, Squire's Gate Aerodrome (Stop), 163 miles. Total 595 miles.

Section 2 (July 6). Blackpool (Start). Silloth (Turning point), 75 miles; Renfrew Aerodrome (Stop), 78 miles; Dunbar (Turning point), 73 miles; Newcastle, Cramlington Aerodrome (Stop), 72 miles; Leeds, Sherburn-in-Elmet Aerodrome (Stop), 92 miles; Nottingham, Hucknall Aerodrome (Turning point), 53 miles; Birmingham, Castle Bromwich Aerodrome (Stop), 46 miles; London, Heston Aerodrome (Finish), 95 miles. Total 584 miles. The turning points in each case will be a white cross on the ground.

The prizes for the race will be as follows:—First Prize—Cup presented by H.M. the King, and £250 presented by Sir Charles Wakefield. Second Prize—£100 presented by Sir Charles Wakefield. Third Prize—£50 presented by Sir Charles Wakefield. Special Prize—£100, also presented by Sir



KING'S CUP AIR RACE : Sketch map of the course.

Charles Wakefield, to the entrant of the aircraft which completes the course in the fastest time.

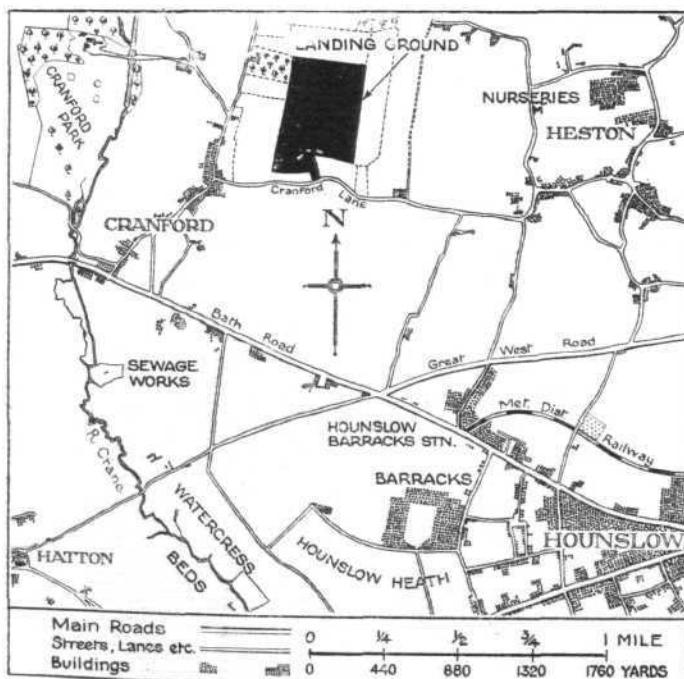
It is a handicap race, and competitors will start from Heston in accordance with their handicap, the first, or limit man, leaving at 8 a.m. Competitors must complete the first section by 10 p.m. (Friday), any arriving at Blackpool after that time will be eliminated from the race. On the Saturday, competitors leave Blackpool also in accordance to their handicap, plus or minus the time gained or lost on the first section. They are expected to arrive at Heston from 4 p.m. onwards.

Heston Aerodrome will be in wireless communication with all controls on the course, and the progress of the race will be announced throughout both days.

The Siddeley Trophy Tour, for the Challenge Cup presented by Mr. J. D. Siddeley, for competition amongst the Light Aeroplane Clubs, is a handicap race, which will be flown simultaneously with the King's Cup Race, and over the same course. Competitors may take part in both events.

There are 21 entries for this event, details of which will be found in a separate table on p. 539. In addition to the Challenge Cup the winner receives a cash prize of £75, presented by Mr. Alan S. Butler, who also presents a second prize of £25. This is the second Siddeley Trophy Tour, the first, which was flown last year, being won by Miss W. E. Spooner (London Aeroplane Club), on her D.H. Moth (Cirrus I).

As regards the entries for the King's Cup, a detailed list of these was published in FLIGHT for June 13 last, but we give these again, in modified form, this week, on p. 539. It will be seen that the light 'plane is very much in evidence, there being no fewer than 51 of these out of the total entry of 60. Of these, the D.H. Moth tops the list with 23, of the various types—"X," "Gipsy," "Coupé," etc. The Avro Avian comes next with 8, including types I (Cirrus II), III (Cirrus III), the IVM (Armstrong-Siddeley Genet and Cirrus Hermes), and a "Gipsy" model. There are 6 Simmonds' Spartans (Cirrus III and Hermes), and 4, Westland Widgeons, powered with the Cirrus II, the Genet, and the Gipsy. Blackburn Bluebirds are represented by two Mark IV's. Three "old staggers" (more or less) will be found in

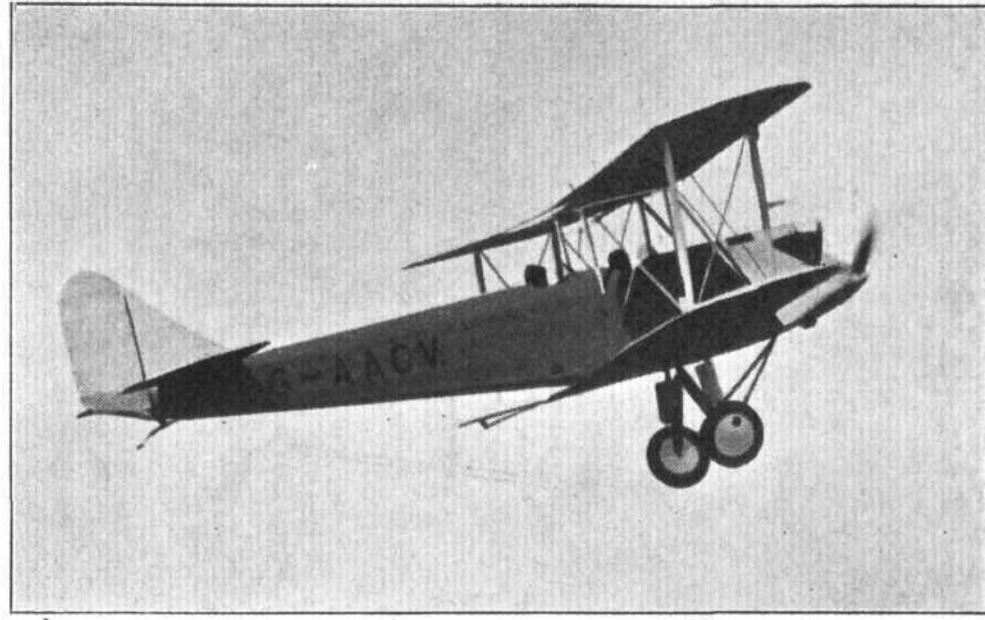


Sketch map showing the position of Heston Aerodrome, where the King's Cup race starts and finishes.

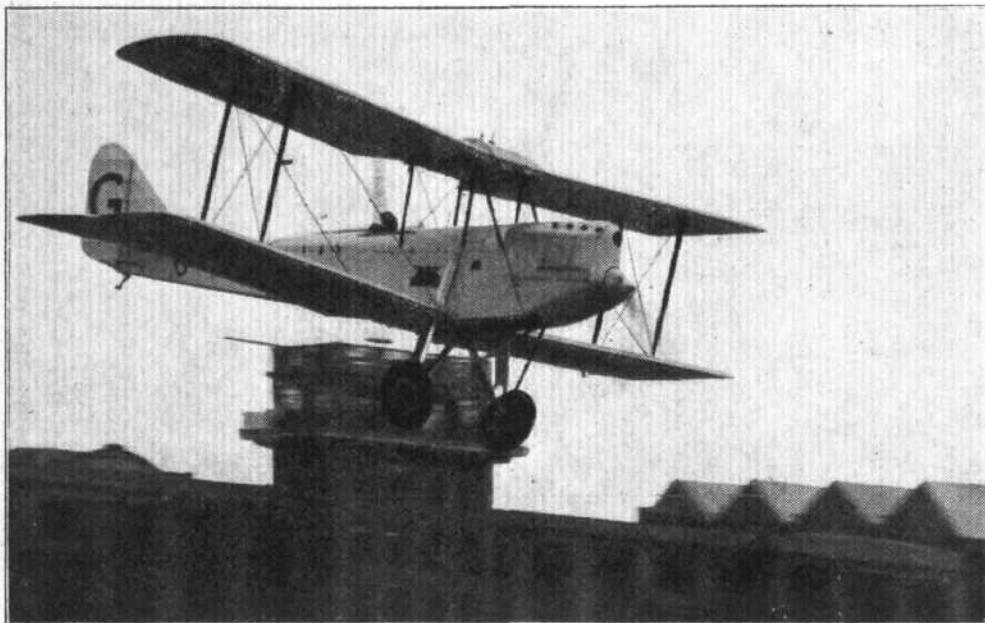
AIRCRAFT IN THE KING'S CUP



Avro "Baby" (60-h.p. "Cirrus"). (FLIGHT Photo.)



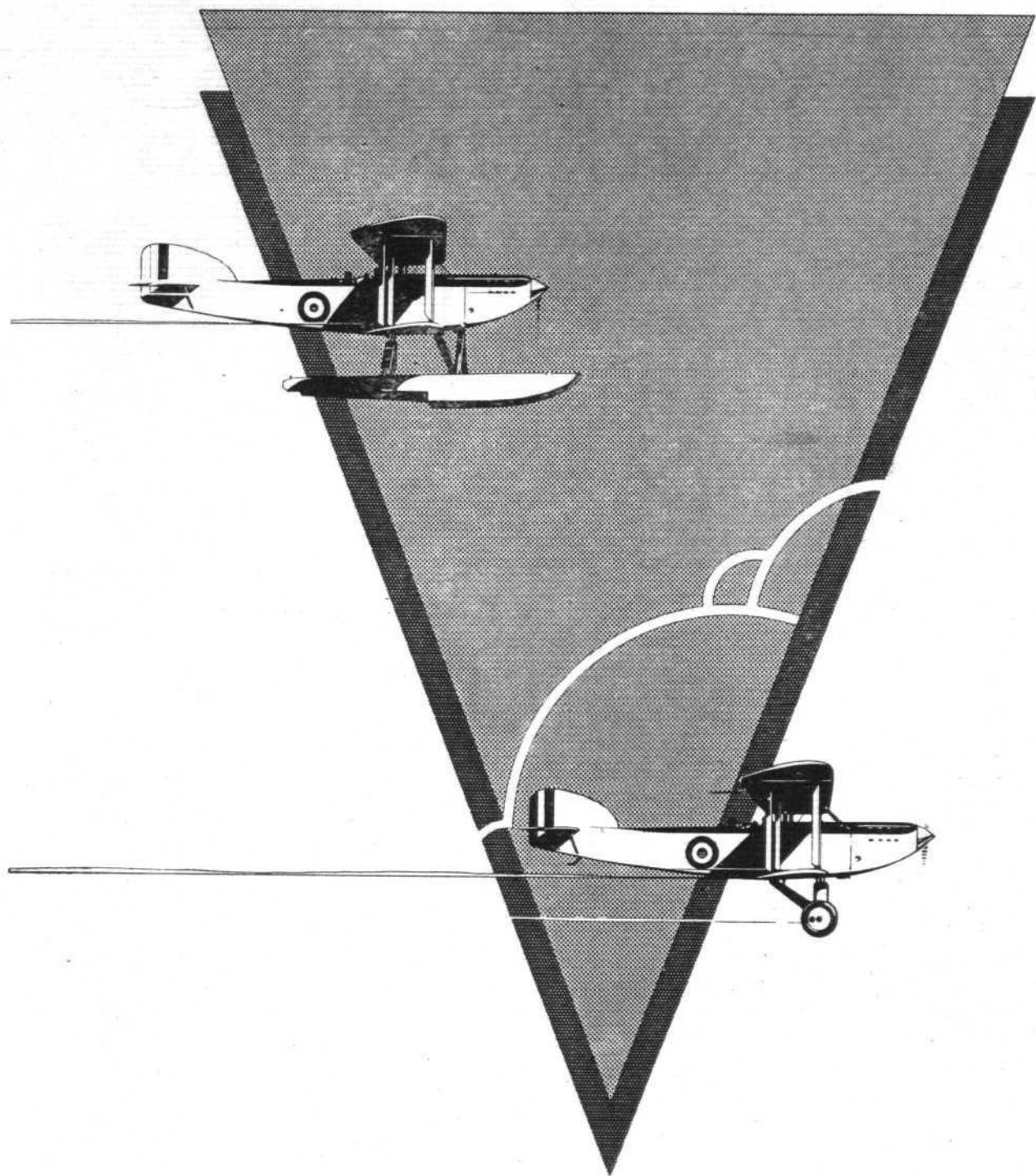
The Avro "Avian" ("Cirrus"). (FLIGHT Photo.)



Avro "Avian" IVM (105-h.p. "Cirrus Hermes"). (FLIGHT Photo.)



The Avro "Avian" (85-h.p. "Gipsy").



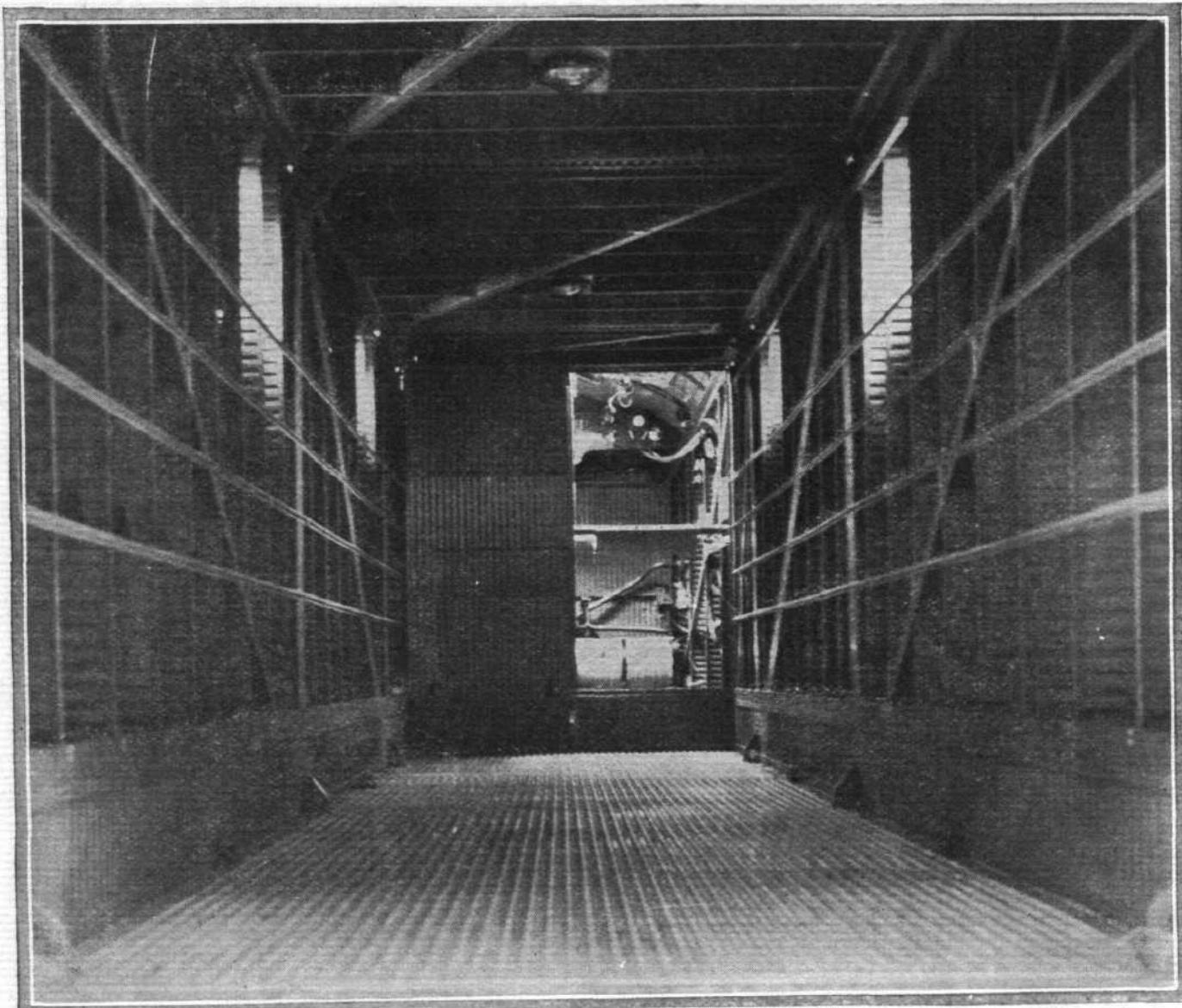
The R.A.F. Display
Hendon + July 13th + 1929
and Stand No. 110
International
Aero Exhibition
O L Y M P I A
July 16th — July 27th
1929

FAIREY
AIRCRAFT

THE FAIREY AVIATION COMPANY LTD. + HAYES + MIDDLESEX.

Save time by using the Air Mail.

VICKERS (AVIATION) LIMITED



THE VICKERS "JAGUAR-VELLORE" AIR FREIGHTER.

Weight unladen 4692 lbs.

Load (Pilot, Fuel, Freight) 4808 lbs.

Cabin Capacity 5½ Shipping tons.

Cabin Dimensions: Length 12' 10", Width 4' 0", Height 4' 10".

All Enquiries to :—

VICKERS HOUSE, BROADWAY, LONDON, S.W.1.

Telephone: VICTORIA 6900.
Telegrams: VICKERS, SOWEST, LONDON.

International Aero Exhibition
16th to 27th July, 1929.
Vickers Supermarine, Stand No. 85, Olympia.



Works: WEYBRIDGE, SURREY.

See Royal Air Force Display,
Hendon, 13th July.

Kindly mention "Flight" when corresponding with advertisers.

Efficiency



**108,000
Machine Miles
"No Troubles"**



THE ROYAL AIR FORCE FAR EAST FLIGHT OF 27,000 MILES FROM ENGLAND ROUND INDIA TO SINGAPORE, ROUND AUSTRALIA TO HONG KONG AND BACK TO SINGAPORE IN FOUR

**SUPERMARINE
"SOUTHAMPTON"**
(METAL CONSTRUCTED)

FLYING BOATS
(Twin Napier "Lion" Engines)

"GIVING NO TROUBLE OF ANY CONSEQUENCE, NO FORCED LANDINGS AND ONLY MINOR REPLACEMENTS" (to quote from the Official Log of 15th January, 1929), IS PROOF OF THE SOUNDNESS OF "SUPERMARINE" DESIGN AND CONSTRUCTION.

One of the "Southampton" flying boats that took part in the Far East Flight will be shewn, by permission of the Air Ministry, on Vickers-Supermarine Stand—No. 85—at the Aero Exhibition, Olympia, July 16th to 27th, 1929.



THE
SUPERMARINE AVIATION WORKS, LTD.
Proprietors: VICKERS [AVIATION] LIMITED
SOUTHAMPTON,
ENGLAND.

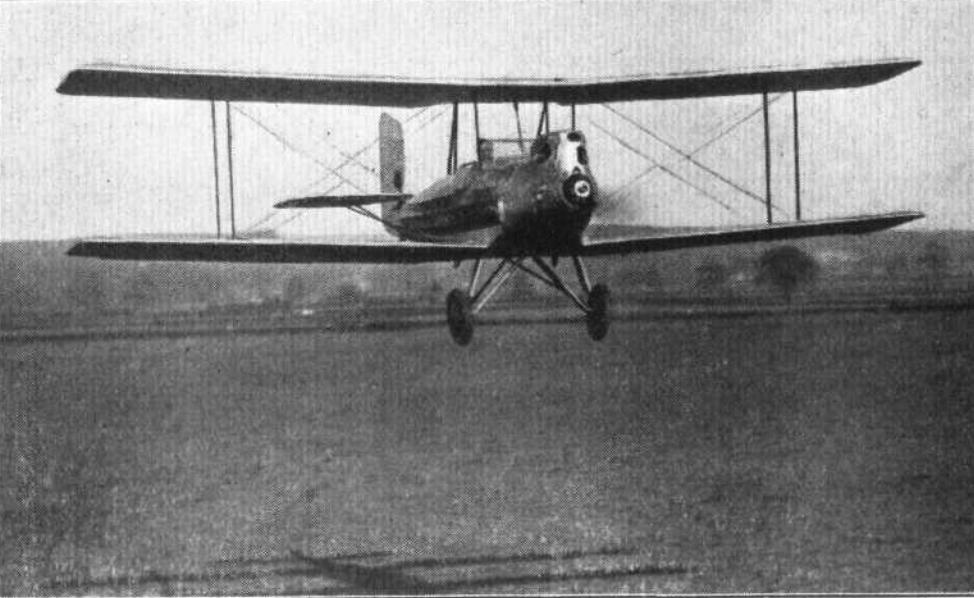
Save time by using the Air Mail.

BOULTON & PAUL LTD., NORWICH
MANUFACTURERS OF
ALL-METAL AEROPLANES
AND AIRSHIPS

INTERNATIONAL AERO EXHIBITION, STAND No. 108



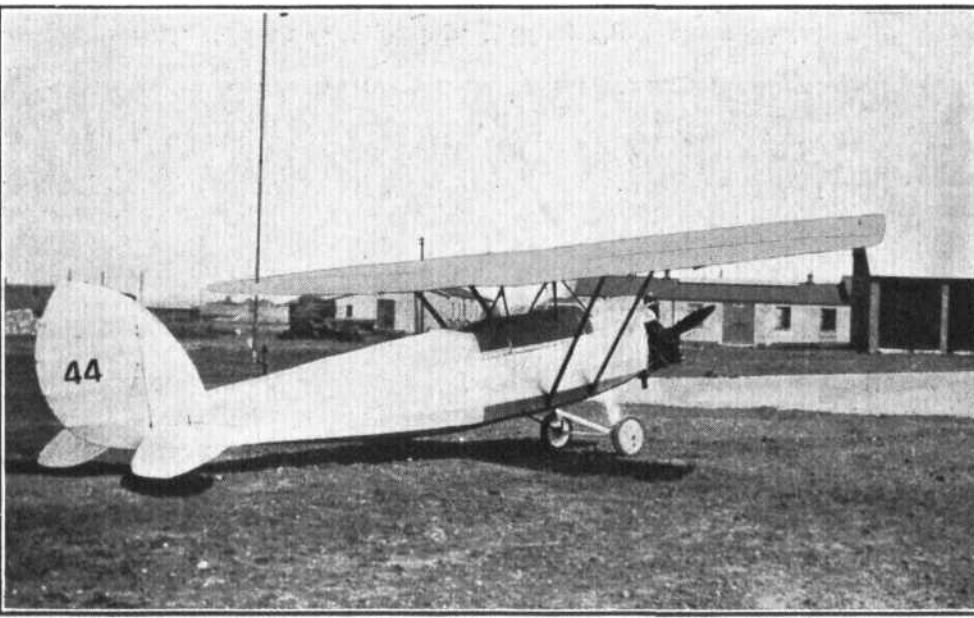
Blackburn "Lincock" (180-h.p. Siddeley "Lynx"). (FLIGHT Photo.)



Blackburn "Bluebird IV" (85-h.p. "Cirrus III"). (FLIGHT Photo.)



Bristol "Bulldog" (490-h.p. Bristol "Jupiter VIa"). (FLIGHT Photo.)



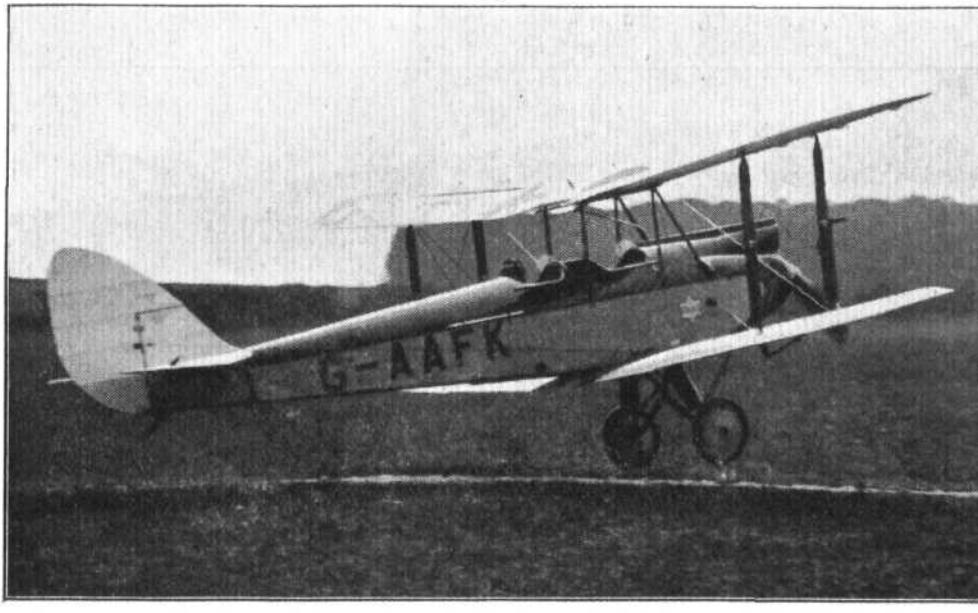
Clarke "Cheetah" (30-h.p. Blackburne "Thrush I").

AIRCRAFT IN THE KING'S CUP

AIRCRAFT IN THE KING'S CUP



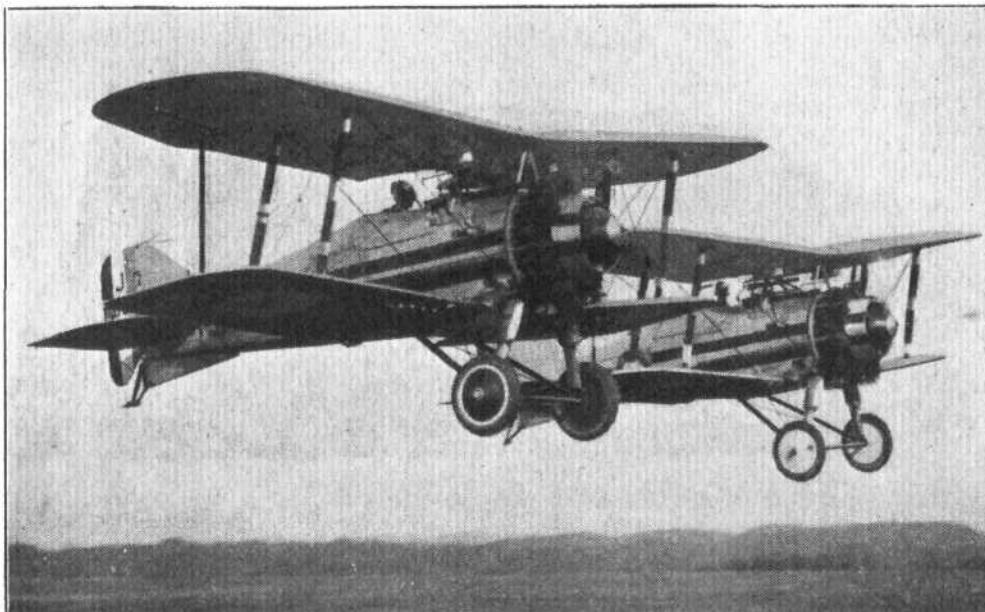
D.H. "Moth X" (75-h.p. "Cirrus II"). (FLIGHT Photo.)



D.H. "Moth G" (85-h.p. "Gipsy") (FLIGHT Photo.)



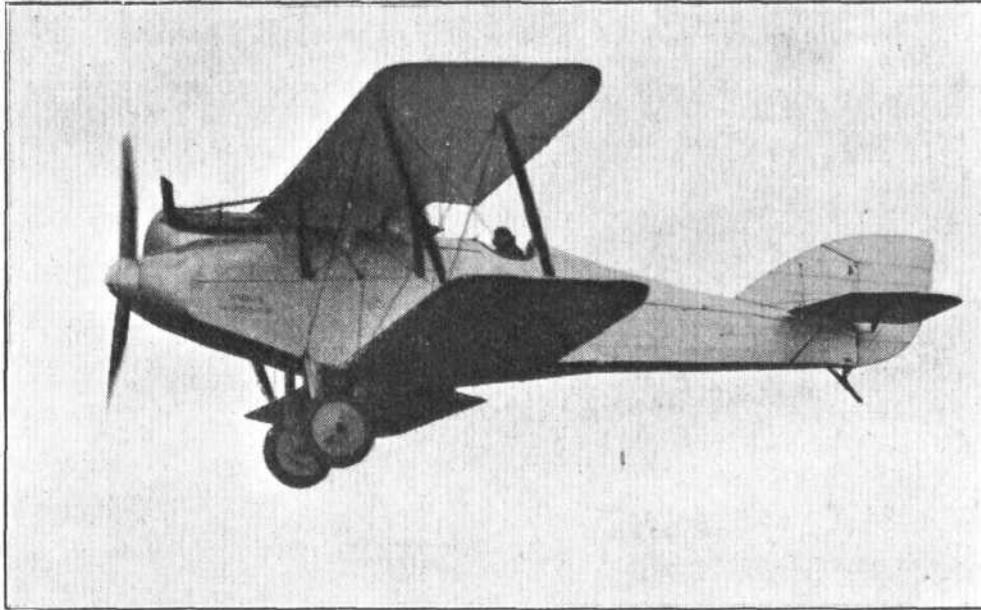
D.H. "Moth Coupé" (85-h.p. "Gipsy"). (FLIGHT Photo.)



Gloster "Grebe" (385-h.p. Siddeley "Jaguar"). (FLIGHT Photo.)



H.A.C.2 "Minus" (31-h.p. Bristol "Cherub III"). (FLIGHT Photo.)



"Nimbus-Martinsyde" (300-h.p. A.D.C. "Nimbus"). (FLIGHT Photo.)



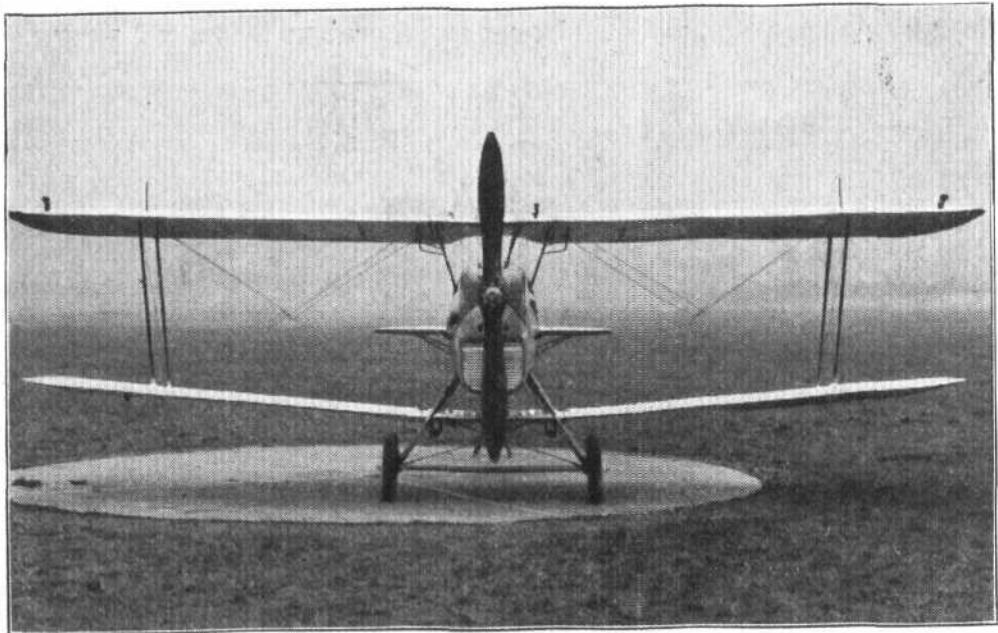
S.E.5A (120-h.p. "Airdisco" and 200-h.p. "Viper"). (FLIGHT Photo.)



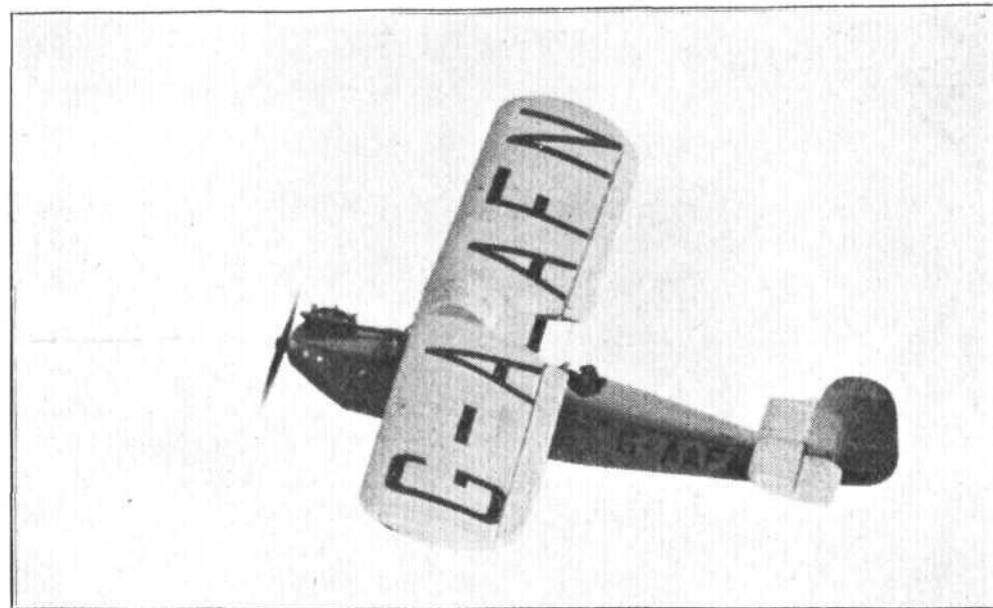
Short "Mussel" (85-h.p. "Cirrus III"). (FLIGHT Photo.)

AIRCRAFT IN THE KING'S CUP

AIRCRAFT IN THE KING'S CUP



Vickers "Fleet Fighter" (490-h.p. Rolls-Royce F-II).



Westland "Widgeon III" (75-h.p. "Cirrus II"). (FLIGHT Photo.)

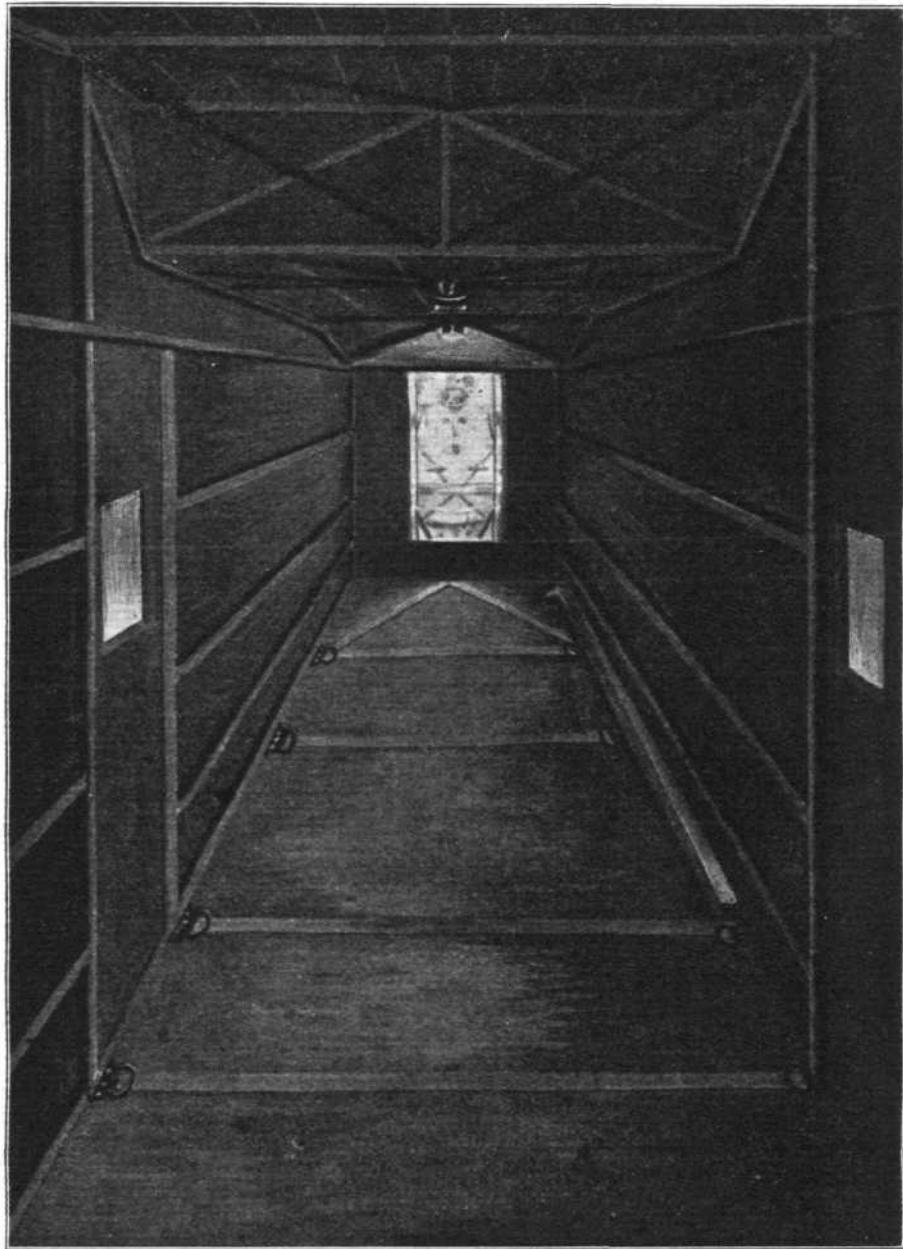


Westland "Widgeon III" (85-h.p. Siddeley "Genet"). (FLIGHT Photo.)



Westland "Widgeon III" (85-h.p. "Gipsy"). (FLIGHT Photo.)

Fokker



THE HOLD OF THE FOKKER F. XIV—"Jupiter" AIR FREIGHTER.

LOAD (pilot, fuel, freight) - - - - - 4,408 lbs.

PAY LOAD - - - - - 2,908 lbs.

CABIN CAPACITY - - - - - 12½ SHIPPING TONS.

CABIN DIMENSIONS: length 16' 5", width 5' 11", height 4' 11".

N. V. NEDERLANDSCHE VLIEGTUIGENFABRIEK.

Rokin 87.

AMSTERDAM.

Telegr.: Fokexport.

Send airmail. *Save time by using the Air Mail.*

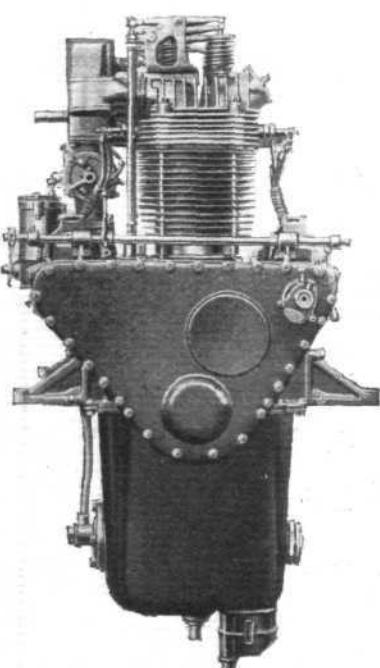
ANNOUNCING THE



THE NEW 105/115 h.p. 4 CYL.



OLYMPIA
STAND 99



Rear view of
"CIRRUS HERMES."

Telephone: HOLBORN 4076.

¶ The "CIRRUS HERMES" engine has been designed to meet the demand for an engine for special purposes of higher power than the "CIRRUS" Mark II or Mark III.

¶ The "CIRRUS HERMES" is an engine of new design and the horse power developed places it, in certain senses, in a different class from the "CIRRUS" engine and similar engines on the market.

¶ The "CIRRUS HERMES" engine, following the precedent created by the Mark I, II and III "CIRRUS" engines, successfully passed the AIR MINISTRY TYPE TEST at the first attempt.

THE "HERMES" ENGINE HAS
TO 19 DIFFERENT TYPES OF

FOREIGN AIR

Designers and manuf

CIRRUS AEROE

Regentou

89, Kingsway.

Kindly mention "Flight" when corresponding with advertisers.

CIRRUS HERMES.

LINE AIR COOLED ENGINE.



¶ The "CIRRUS HERMES" can be installed on the same engine bearers as the "CIRRUS," and when fitted in Light Aircraft provides a large reserve of power.

¶ The "CIRRUS HERMES" is specially suitable for Service Training purposes, for small flying boats, for twin and triple engined aircraft and for Light Aircraft (especially seaplanes) operating in hot climates or at high altitudes.

¶ The "CIRRUS HERMES" will be shown on our stand at the International Aero Exhibition, Olympia, and will also be installed in Aircraft of new design, exhibited by various British Manufacturers.

OLYMPIA
STAND 99

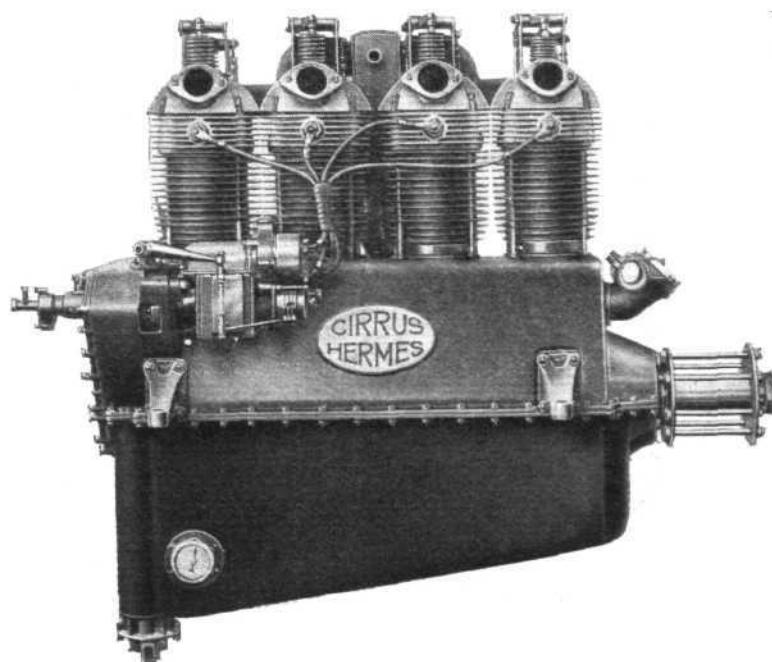
READY BEEN FITTED F BRITISH AND CRAFT.

facturers :

ENGINES LTD.,

use,

London, W.C.2.



Side view "CIRRUS HERMES."

Cables: "OCIRRUSO, LONDON."

Save time by using the Air Mail.

A Page of Aerial History

KING'S CUP AIR RACE

**1926
MOTH
FIRST**

**1927
MOTH
FIRST**

**1928
MOTH
FIRST**

See the Moth on Stand 16 Section A and
the Gipsy Engine on Stand 15 Section B
at the Olympia Aero Exhibition, July
16th — 27th, 1929.

Streets

THE DE HAVILLAND AIRCRAFT
CO., LIMITED
Stag Lane Aerodrome, Edgware,
Middlesex

THE DE HAVILLAND AIRCRAFT
OF CANADA, LIMITED
Bay-Richmond Building, 372 Bay Street,
Toronto 2, Canada

THE DE HAVILLAND AIRCRAFT
PTY., LIMITED
Whiteman Street, South Melbourne,
Australia

Kindly mention "Flight" when corresponding with advertisers.

the Avro Baby, Short Mussel, and Supermarine Sparrow, while there are four "dark horses" in the Clarke Cheetah, H.A.C. 3. Meteor, Hendy Hobo and Bellairs Martlet. It is to be hoped that these latter will be able to put in an appearance, although we believe it is doubtful in some cases.

For instance, at the last minute Flying Officer Clarke has been unable to get an Airworthiness Certificate for the "Cheetah" in time to present same to the Royal Aero Club, and at the time of writing, Flying Officer Clarke is dashing about between Martlesham, Farnborough, the Royal Aero Club, etc., etc., in the hopes of getting matters cleared up—

and we sincerely trust he will, for his effort in the "Cheetah" is a spare time job and deserves encouragement.

We learn, also, that the H.A.C. 3 "Meteor" will not be finished in time for the race, while "C of A" trouble, similar to the case of the "Cheetah," will probably put the Cierva Autogiro out of the race—which is a pity, as this machine's performance would have been watched with interest, for we understand this type of aircraft has made considerable progress of late.

In the remaining 8 machines we have some very fast craft, and these should provide some good sport.

COMPETITORS IN THE KING'S CUP AIR RACE, JULY 5-6, 1929.

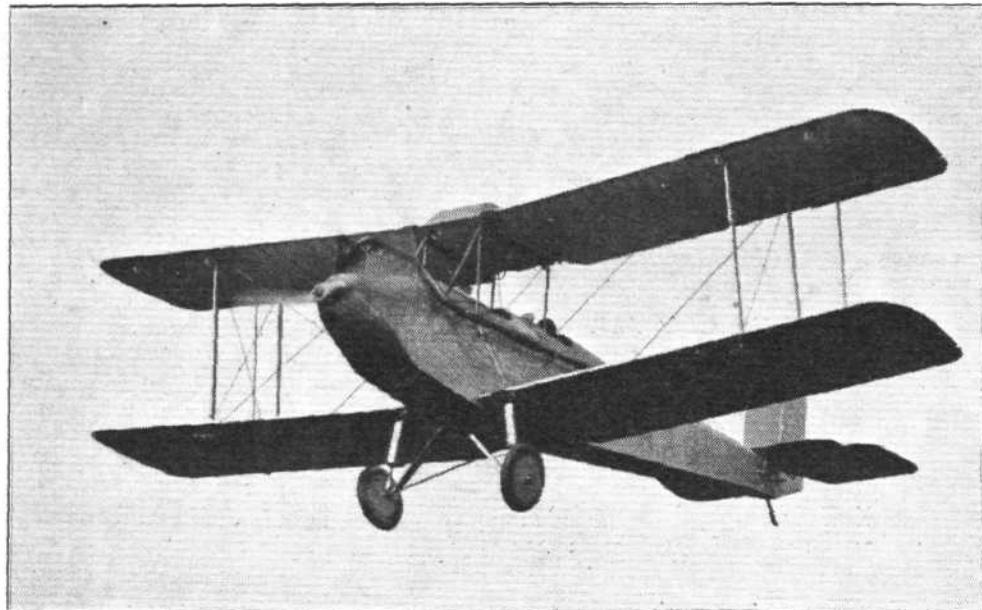
No. and Identif. mark	Machine	Engine	Entrant	Pilot	Start h. m. s.	Handicap (1st Stage) h. m. s.	Handicap (2nd Stage) h. m. s.
13 (EBOO)	H.A.C. 2 "Minus"	31 Cherub III	C. H. Latimer Needham	G. R. Ashton	8 0 0	4 0 13	3 56 9
30 (EAUM)	Avro Baby	60 Cirrus I	H. H. Leech	H. H. Leech	8 40 14	3 19 59	3 16 36
26 (AAGN)	Simmonds Spartan	85 Cirrus III	L. A. Strange	L. A. Strange	9 11 49	2 48 24	2 45 34
5 (EBTH)	D.H. Moth X	75 Cirrus II	V. N. Dickinson	V. N. Dickinson	9 13 45	2 46 28	2 43 39
16 (EBXJ)	Avro Avian III	75 Cirrus II	H. J. V. Ashworth	H. J. V. Ashworth	9 13 45	2 46 28	2 43 39
28 (AAGY)	Simmonds Spartan	85 Cirrus III	T. B. Bruce	T. B. Bruce	9 13 45	2 46 28	2 43 39
47 (EBWX)	D.H. Moth X	75 Cirrus II	H. H. Balfour	H. H. Balfour	9 13 45	2 46 28	2 43 39
59 (AACM)	Simmonds Spartan	85 Cirrus III	J. G. Peel	G. E. F. Boyes	9 13 45	2 46 28	2 43 39
17 (EBFP)	Simmonds Spartan	85 Cirrus III	J. Parkinson	R. W. Jackson	9 17 33	2 42 40	2 39 55
29 (EBYJ)	D.H. Moth X	75 Cirrus II	H. R. Law	H. R. Law	9 17 33	2 42 40	2 39 55
41 (AAC)	Bluebird IV	85 Cirrus III	Master of Sempill	Master of Sempill	9 21 17	2 38 56	2 36 15
2 (EBRN)	Westland Widgeon III	75 Cirrus II	E. R. Manning	E. R. Manning	9 22 15	2 37 58	2 34 28
10 (EBRM)	Westland Widgeon III	75 Cirrus II	R. G. Cazalet	R. G. Cazalet	9 28 30	2 31 43	2 29 9
15 (EBPQ)	D. H. Moth	85 Cirrus III	L. G. Richardson	L. G. Richardson	9 28 30	2 31 43	2 29 9
53 (AAKH)	Avro Avian	85 Gipsy	R. F. Clark	J. C. Cantrill	9 28 30	2 31 43	2 29 9
48 (AAAT)	Avro Avian	85 Cirrus III	J. Barrett-Lennard	C. F. Le Poer Trench	9 35 26	2 24 47	2 22 20
11 (AAHB)	D.H. Moth G	85 Gipsy	E. Tiarks	F. L. Kimmens	9 37 7	2 23 6	2 20 41
60 (AAIV)	D.H. Moth G	85 Gipsy	B. E. Lewis	B. E. Lewis	9 37 7	2 23 6	2 20 41
4 (AAEW)	D.H. Moth G	85 Gipsy	D. S. Schreiber	D. S. Schreiber	9 38 49	2 21 24	2 19 1
21 (AACO)	D.H. Moth G	85 Gipsy	J. W. P. Chalmers	J. W. P. Chalmers	9 38 49	2 21 24	2 19 1
38 (AAHO)	D.H. Moth G	85 Gipsy	L. St. C. Ingram	P. P. Grey	9 38 49	2 21 24	2 19 1
43 (AADC)	D.H. Moth G	85 Gipsy	W. R. Bailey	W. R. Bailey	9 38 49	2 21 24	2 19 1
58 (EBVK)	D.H. Moth X	75 Cirrus II	G. Mackinnon	M. Brunton	9 38 49	2 21 24	2 19 1
9 (EBRQ)	Westland Widgeon III	85 Genet	"J. Wellworth"	"J. Wellworth"	9 42 7	2 18 6	2 15 46
27 (EBQN)	Avro Avian I	75 Cirrus II	P. N. G. Peters	G. Thorne	9 42 7	2 18 6	2 15 46
35 (AACL)	D.H. Moth G Coupé	85 Gipsy	A. S. Butler	Mrs. A. S. Butler	9 44 44	2 15 29	2 14 11
12 (AAHG)	D.H. Moth G	85 Gipsy	A. F. Wallace	A. F. Wallace	9 46 56	2 13 17	2 11 1
3 (AADE)	Westland Widgeon III	85 Gipsy	C. S. Napier	C. S. Napier	9 48 32	2 11 41	2 9 27
33 (AADX)	D.H. Moth G Coupé	85 Gipsy	A. C. M. Jackaman	A. C. M. Jackaman	9 48 32	2 11 41	2 9 27
36 (AAAA)	D.H. Moth G	85 Gipsy	G. de Havilland	G. de Havilland	9 48 32	2 11 41	2 9 27
32 (AAAL)	D.H. Moth G	85 Gipsy	Miss W. E. Spooner	Miss W. E. Spooner	9 50 6	2 10 7	2 7 55
37 (AADA)	D.H. Moth G	85 Gipsy	J. D. Irving	J. D. Irving	9 50 6	2 10 7	2 7 55
6 (AAEE)	D.H. Moth G Coupé	85 Gipsy	Lady Bailey	Lady Bailey	9 51 40	2 8 33	2 6 23
49 (AAHJ)	Avro Avian IVM	105 Hermes	M. O. Darby	T. N. Stack	10 0 41	1 59 32	1 57 31
1 (EBTO)	S.E.5a	120 Airdisco	W. L. Handley	T. Rose	10 3 35	1 56 38	1 54 40
7 (AAPH)	D.H. Moth G	85 Gipsy	W. L. Hope	W. L. Hope	10 19 56	1 40 17	1 38 34
34 (EBQH)	D.H. Moth G	85 Gipsy	A. S. Butler	A. S. Butler	10 25 1	1 35 12	1 33 35
20 (AAHR)	D. H. Moth G. Coupé	85 Gipsy	Sir Chas. Wakefield	H. S. Broad	10 29 56	1 30 17	1 28 45
31 (EBQM)	S.E.5a	200 Viper	Duke of Northumberland	A. H. Wheeler	10 39 18	1 20 55	1 19 33
39 (J.7520)	Gloster Grebe	385 Jaguar	Sir Walter Preston	"R. Llewellyn"	11 26 30	0 33 43	0 33 9
40 (J.7519)	Gloster Grebe	385 Jaguar	Hon. F. E. Guest	E. H. Fielden	11 26 30	0 33 43	0 33 9
51 (EBNQ)	Vickers Fleet Fighter	490 Rolls-Royce F.11	Sir Robert McLean	J. Summers	12 0 13	Scratch	Scratch

Note.—The following Entrants have not been placed, owing, amongst other reasons, to their Certificates of Airworthiness not having been handed in at the time laid down in the rules.

8 (AADP)	D.H. Moth G	85 Gipsy	B. E. Lewis	B. E. Lewis	—	—	—
14 —	H.A.C.3 "Meteor"	31 Cherub	C. H. Latimer Needham	—	—	—	—
18 (AAHH)	Bristol Bulldog	490 Jupiter VIIA	Sir G. Stanley White	C. F. Uwins	—	—	—
19 (AABT)	Avro Avian IVM	85 Genet	Lady Wakefield	S. N. Webster	—	—	—
22 (AABR)	Avro Avian IVM	85 Genet	J. F. Leeming	H. A. Brown	—	—	—
23 (AABS)	Avro Avian IVM	85 Genet	Ald. W. Davy	J. Oliver	—	—	—
24 —	Simmonds Spartan	85 Cirrus III	W. L. Roberts	H. T. Andrews	—	—	—
25 —	Simmonds Spartan	105 Hermes	O. E. Simmonds	C. S. Staniland	—	—	—
42 (AAII)	"Martlet"	75 Hornet	L. E. R. Bellairs	L. E. R. Bellairs	—	—	—
44 —	Clarke Cheetah	30 Thrush I	J. Clarke	J. Clarke	—	—	—
45 (AAIG)	Hendy Hobo	40 Scorpion II	B. H. Henderson	E. W. Percival	—	—	—
46 (EBQH)	D.H. Moth GS	85 Gipsy	A. S. Butler	A. S. Butler	—	—	—
50 (EBQJ)	N-Martinsyde	300 Nimbus	T. N. Stack	—	—	—	—
52 —	Bluebird IV	85 Cirrus III	C. A. Ridley	D. D'A. A. Greig	—	—	—
54 (EBVO)	Lincock	180 Lynx	R. Blackburn	A. M. Blake	—	—	—
55 (AAFZ)	Short Mussel	85 Cirrus III	A. E. Short	J. L. Parker	—	—	—
56 (EBJP)	Supermarine Sparrow	31 Cherub-III	C. H. Latimer-Needham	E. E. Arnold	—	—	—
57 (AAGJ)	Autogiro C.17.M.II	Alpha II	J. G. Weir	A. H. C. A. Rawson	—	—	—

COMPETITORS IN THE SIDDELEY TROPHY TOUR.

No. and Identification Mark.	Entrant and Pilot.	Machine.	Engine.
3 G-AADE	C. S. Napier (Bristol and Wessex Aeroplane Club)	Westland "Widgeon" III	85 "Gipsy"
4 G-AAEW	D. S. Schreiber (Royal Aircraft Establishment Aero Club)	D.H. "Gipsy Moth"	85 "Gipsy"
6 G-AAEE	The Hon. Lady Bailey (Suffolk and Eastern Counties Aeroplane Club)	D.H. "Gipsy Moth" Coupé	85 "Gipsy"
7 G-AAPH	Capt. W. L. Hope (London Aeroplane Club)	D.H. "Gipsy Moth"	85 "Gipsy"
9 G-EBRQ	J. Wellworth (Halton Aero Club)	Westland "Widgeon" III	85 "Genet" III
10 G-EBRM	R. G. Cazalet (Midland Aero Club)	Westland "Widgeon" III	75 "Cirrus" II
12 G-AAHG	A. F. Wallace (London Aeroplane Club)	D.H. "Gipsy Moth"	85 "Gipsy"
13 G-EOO	Flight-Lieut. G. R. Ashton (Halton Aero Club)	H.A.C.2 "Minus"	31 "Cherub"
15 G-EBPQ	Lieut. L. G. Richardson, R.N. (London Aeroplane Club)	D.H. "Moth"	85 "Cirrus" III
21 G-AACO	J. W. P. Chalmers (London Aeroplane Club)	D.H. "Gipsy Moth"	85 "Gipsy"
27 G-EBQN	Flying Officer G. Thorne (Royal Aircraft Establishment Aero Club)	Avro "Avian" I	75 "Cirrus" II
29 G-EBYJ	H. R. Law (Cinque Ports Flying Club)	D.H. "Moth" X	75 "Cirrus" II
30 G-EAUM	Pilot Officer H. H. Leech (Hampshire Aeroplane Club)	Avro "Baby" 534	60 "Cirrus" I
32 G-AAAL	Miss W. E. Spooner (Berks, Bucks and Oxon Aeroplane Club)	D.H. "Gipsy Moth"	85 "Gipsy"
33 G-AADX	A. C. M. Jackaman (London Aeroplane Club)	D.H. "Gipsy Moth" Coupé	85 "Gipsy"
34 G-EBQH	A. S. Butler (Household Brigade Flying Club)	D.H. "Gipsy Moth"	85 "Gipsy"
37 G-AADA	J. D. Irving (Newcastle-upon-Tyne Aero Club)	D.H. "Gipsy Moth"	85 "Gipsy"
43 G-AADC	Capt. W. R. Bailey (London Aeroplane Club)	D.H. "Gipsy Moth"	85 "Gipsy"
44 G-AAJK	Flying Officer J. Clarke (Halton Aero Club)	Clarke "Cheetah"	30 "Thrush" I
46 G-EBQH	A. S. Butler (Household Brigade Flying Club)	D.H. "Gipsy Moth"	85 "Gipsy" (S)
56 G-EBTP	Flight-Lieut. E. E. Arnold, D.F.C. (Halton Aero Club)	Supermarine "Sparrow"	31 "Cherub"



AIRCRAFT IN THE
KING'S CUP :

Siammonds "Spartan"
(85-h.p. "Cirrus III").

(FLIGHT Photo)

" Previous King's Cup Winners

1922, Sept. 8-9.—810 miles (Croydon-Birmingham-Newcastle-Glasgow-Manchester-Bristol-Croydon). Capt. F. L. Barnard on a D.H.4a (350 h.p. Rolls-Royce "Eagle"), entered by Sir Samuel Instone. Speed, 120 m.p.h.

1923, July 13-14.—794 miles (Hendon-Birmingham-Newcastle-Glasgow-Manchester-Bristol-Hendon). Capt. F. T. Courtney on an Armstrong-Whitworth "Siskin" (325 h.p. Armstrong-Siddeley "Jaguar"), entered by Mr. J. D. Siddeley. Speed, 149 m.p.h.

1924, Aug. 12.—Land- and Sea-planes, 950 miles (Martlesham and Felixstowe-Leith-Dumbarton-Falmouth-Lee-on-Solent). A "go-as-you-please" handicap race, competitors started all at once (more or less) and were allowed to land anywhere en route. Alan J. Cobham on a D.H.50 (230 h.p. Armstrong-Siddeley "Puma"), entered by Sir Charles Wakefield. Speed, 106 m.p.h.

1925, July 3-4.—1,608 miles (two circuits (a) Croydon-Harrogate-Newcastle-Glasgow-Blackpool-Shotwick-Bristol-

Croydon; and (b) vice-versa. Capt. F. L. Barnard, on an Armstrong-Whitworth "Siskin", entered by Sir Eric Geddes. Speed, 141 m.p.h.

1926, July 9-10.—732 miles (four circuits, alternately (a) Hendon-Martlesham-Cambridge-Hendon; and (b) Hendon-Coventry-Cheltenham-Hendon). Capt. H. S. Broad, on a D.H. "Moth" (27-60 h.p. A.D.C. "Cirrus I"), entered by Sir Charles Wakefield. Speed 90.5 m.p.h.

1927, July 30. 540 miles (three circuits, (a) Hucknall-Spittlegate-Huntingdon-King's Lynn-Cranwell-Hucknall; (b) Hucknall-Howden-Skegness-Hucknall; and (a) again. Capt. W. L. Hope, on a D.H. "Moth" (27-60 h.p. A.D.C. "Cirrus"), entered by the pilot. Speed, 92.5 m.p.h.

1928, July 20-21.—1,100 miles (Hendon-Norwich-Birmingham-Hucknall-Sherburn-Newcastle-Glasgow-Silloth-Blackpool-Manchester-Bristol-Hamble-Lymnne-Brooklands). Capt. W. L. Hope on a D.H. "Moth G" (85 h.p. "Gipsy"), entered by the pilot. Speed, 105.5 m.p.h.

AIRCRAFT IN THE
KING'S CUP :

Supermarine "Sparrow"

(31-h.p. Bristol

"Cherub III").

(FLIGHT Photo)



Schneider Course

THE last details of the course over which the race for the Schneider trophy will be flown, on the afternoon of September 7, have been settled. The race will take place within an area having its extreme length between Cowes and Hayling Island. Starting at Ryde, the competitors will fly along the Isle of Wight shore as far as Seaview, then go out to a point opposite Hayling Island, where they turn back along the Portsmouth and Gosport shores as far as Cowes, and then turn back to Ryde again.



Exhibition Item

THE Society of British Aircraft Constructors will have a Reception Bureau at the exhibition at which interpreters will be in attendance, and it is hoped that foreign visitors will make a point of leaving their names at the Reception Bureau. Invitations to visit the exhibition have been sent to representatives of foreign governments and to foreign aircraft and engine constructors. It is the desire of the society that foreign visitors shall receive every attention, and any who call will be received by a member of the committee.

The
Fairey
MonoplaneNapier
Lion
Engine.

THIS particular flight (from England to India) is but one of the many achievements to which the engine has lately brought success. It affords an opportunity to pay a tribute to the engine.

In various degrees of modification, but always with the same foundation, the Napier engine has set up speed records in Segrave's car, Segrave's boat, Campbell's car, D'Arcy Greig's seaplane, Webster's seaplane and Broad's aeroplane. It has set up a unique record in reliability by flying from England to Australia in a flight of twin-engined flying boats, and now it has flown for the first time non-stop to India. Normally one hesitates to bestow superlative praise upon the productions of a commercial organisation; but in this instance it would be unjust to withhold superlative praise. In reliability, lightness, power, compactness and versatility this engine—I am weighing the words—excels any prime mover in existence. Its heart is reliability, and its thews and sinews are speed. The Cranwell-Karachi flight is a small addition to the heap of success which this British engine has amassed."

Tatler—8th May, 1929.

NAPIER

The finest aero engine in the World

D. NAPIER & SON, LTD.
ACTON, LONDON,
AND REDUCED
W.3

Stand
100

International
Aircraft
Exhibition
July 16-27
OLYMPIA

Save time by using the Air Mail.



The Hawker "TOM-TIT" Training machine with Armstrong Siddeley Mongoose engine, now in production for the Royal Air Force.

THE ROTTERDAM MEETING



Great Britain Again Successful

BETWEEN 40 and 50 light aeroplanes representing Holland, Great Britain, Belgium, France and Germany, took part in the International Light Plane Meeting organised by the Rotterdam Aero Club and held at the Waalhaven Aerodrome on June 27, 28, 29 and 30. Although but the second event of this sort to be organised by the Rotterdam Aero Club, the meeting was a success in every way, and it speaks well for the organisation that every event on the programme was carried out without a single mishap, and without injury to personnel or damage to machines. In view of the large number of participants, this is a record of which our very good Dutch friends may well be proud.

Thursday, June 27, at 4 p.m., was "zero hour," as this was the time for competitors to arrive from their various home stations, and marks were scored in the Rally according to how close to 4 p.m. competitors managed to land. Great Britain did remarkably well in the Rally, securing first, second and third places. "Mr." Carberry secured first place on "Gipsy-Moth" G-AAHT, Mr. Law

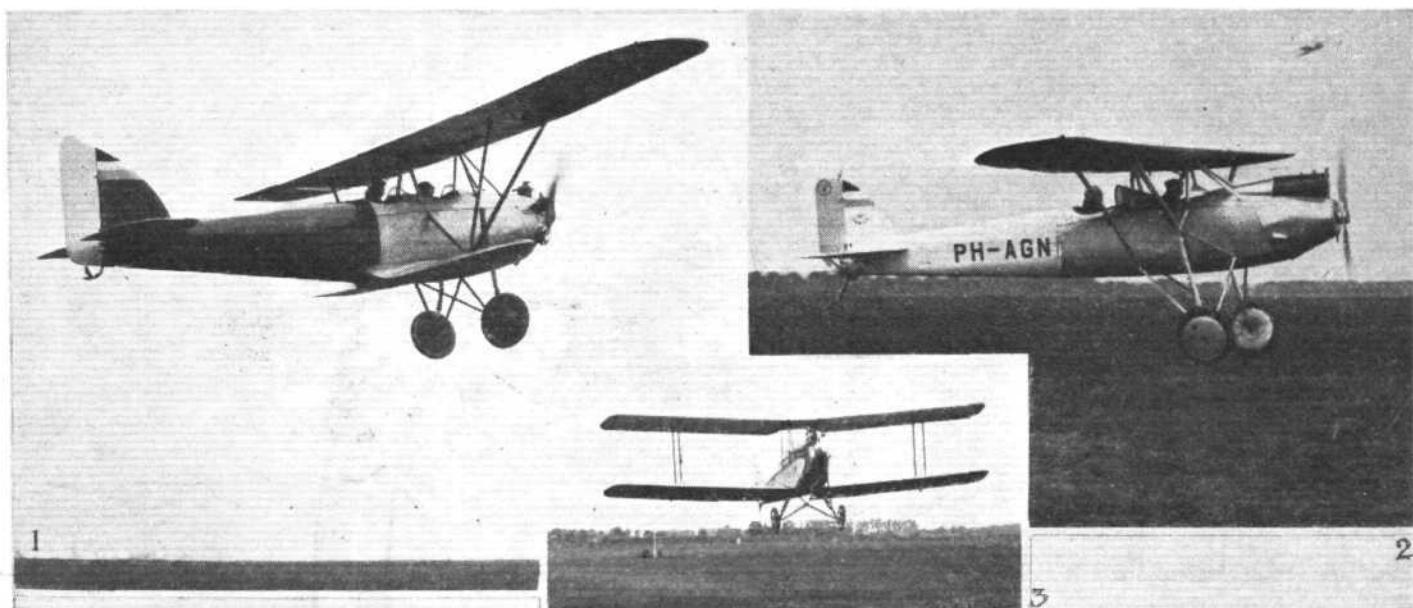
second on "Cirrus - Moth" G-EBYJ, and Mr. Cazalet third on "Cirrus II - Widgeon" G-EBRM.

From the spectators' point of view Friday's programme was not very exciting, although thoroughly enjoyed by the competitors. The morning was devoted to the altitude competition, in which a height of 1,500 metres had to be attained in the shortest possible time, and in the afternoon all competitors had to make a cross-country flight over a closed circuit, with start and finish at Waalhaven. The course lay *via* Dordrecht and Utrecht to Soesterberg, where a halt of 15 minutes was made for refreshments. Then on to Schiphol, where another halt was made, and return *via* Haarlem, along the coast to Scheveningen, and back to Waalhaven. All machines completed the course satisfactorily. In the evening there was a very enjoyable banquet at "De Maas" yacht club.

Saturday saw the beginning of the "serious" part of the meeting, the first item on the programme being the landing competition, in which machines had to land over a tape



The Prince Consort inspecting competing machines, conducted by Mr. Kolff, President of the Rotterdam Aero Club (FLIGHT Photo.)



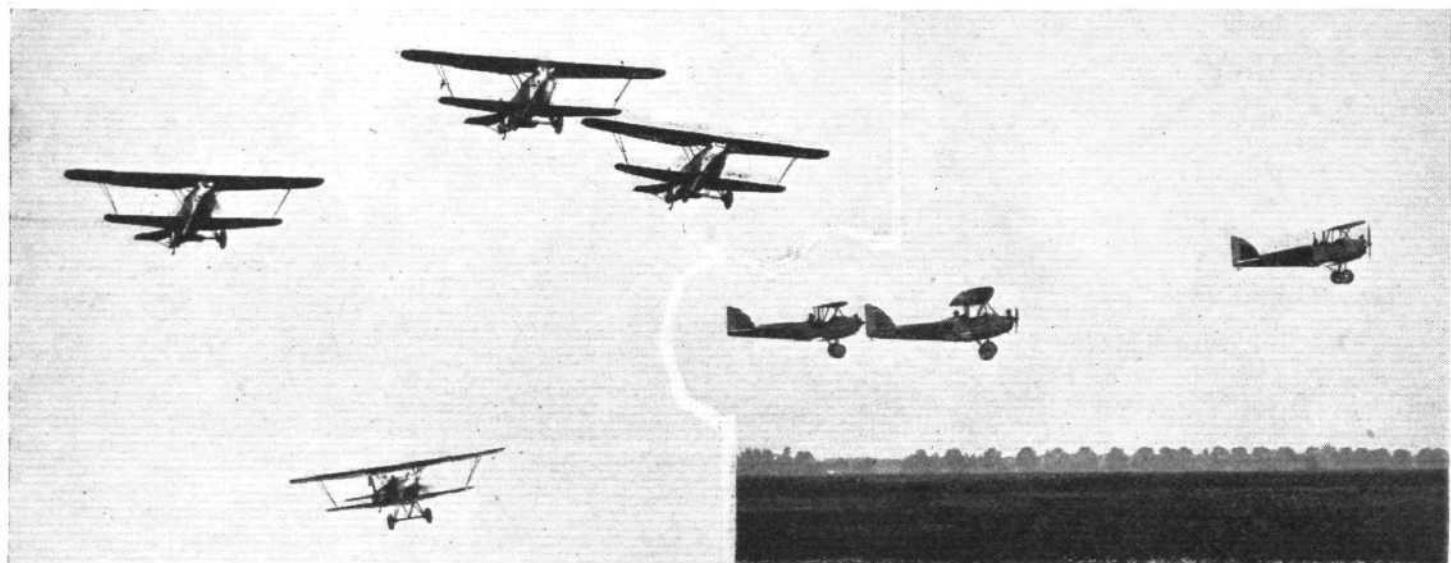
"OVER THE TAPE" AT ROTTERDAM : Three styles in the take-off tests—1. One of the Club Panders. 2. The Pander Monoplane with de Havilland "Gipsy" engine. 3. Mr. Carberry in his "Gipsy-Moth." (FLIGHT Photos.)

suspended on posts 6 ft. above the ground, and pull up in the shortest possible distance. As was to be expected, there were some amusing incidents, but no machine was damaged in these tests. Two of the club Panders took the tape down with them. Lady Bailey made a very excellent landing on her first attempt, but had misunderstood instructions and failed to stop after landing, so that her distance could not be measured. Her second attempt was not quite as good as the first. One of the "Gipsy"-engined Pander monoplanes, designed for racing rather than short pull-up, ran along too far, and the officials did not have enough measuring tape to reach it. Two American visitors, Ross Hadley and Chet Loomis, of Hollywood, who are on a tour of Europe on a Stearman biplane with "Whirlwind" engine, tried their hand at landing, and did comparatively well. Mr. "Harold Brooklyn," on the "Widgeon," approached the tape very low, jumped over it and landed, but was rather too fast to pull up in a very short distance. Mr. Jackaman, on "Gipsy Moth" coupé G-AADX with slots, made an excellent and very short landing.

At the finish of the landing tests the three Rotterdam Club Pander biplanes "formated" very nicely, and later Flight-Lieut. le Poer Trench, who had come over as passenger with Cazalet, borrowed "Gipsy-Moth" G-AAAV from Mr. Cooper and gave a fine display of stunting.

During Saturday the heats in the relay race were run off, and it so happened that by the victories in the various heats the machines left to fight out the final were three British, three Dutch and three Belgians. This promised well for the final next day, which had thus become a truly international event.

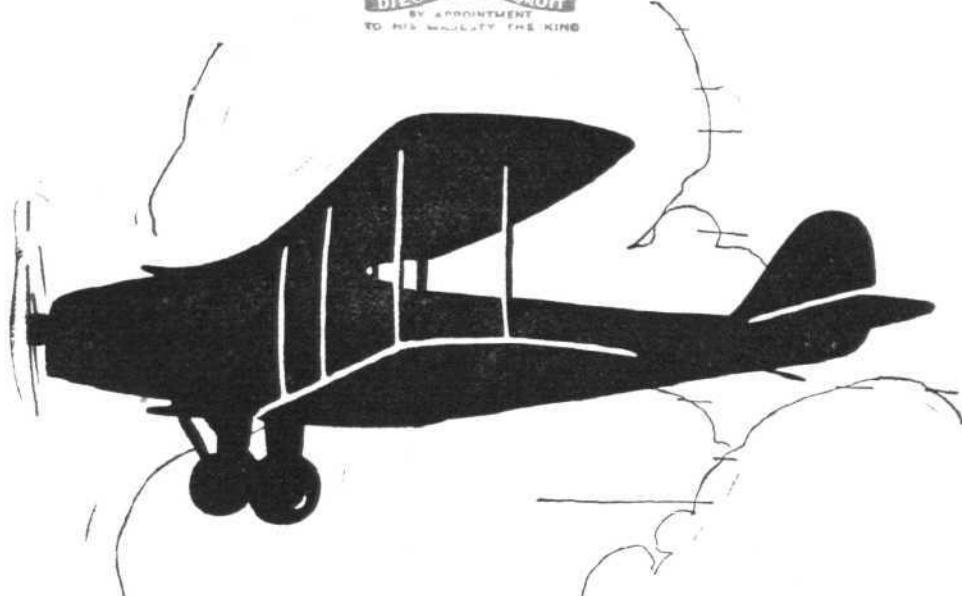
Mr. Downes Shaw arrived at Waalhaven Saturday evening, after having been "missing" for some time, to the disquietude of his friends. It appeared that he had landed at Ostend on Friday evening, and that on Saturday morning a mechanic, without instructions, had started to walk the machine out of the hangar, and in doing so caught the trailing edge on the door, causing some slight damage. This was repaired by a local coachbuilder, and Mr. Downes Shaw was able to finish his journey.



"FORMATING" AT ROTTERDAM : On the left Capt. Versteegh's squadron forming up for their display, and on the right the three little Club Panders taking off. (FLIGHT Photos.)



AT THE ROTTERDAM MEETING : On the left, General Snyders is seen presenting a prize to Mr. Carberry. In the group are seen also Mr. Kolff, President of the Rotterdam Aero Club, Lieut. Jongbloed, Dr. Wolff and Capt. Versteegh. On the right, two veterans of the air : Olieslagers, one of Belgium's earliest pilots, being received by Van Meel, a pioneer Dutch pilot. (FLIGHT Photos.)



GREAT FLIGHTS ON CASTROL

First Atlantic Flight by Aeroplane, 1919

First Atlantic Flight by Airship, 1919

First Direct Flight across S. Atlantic, 1926

First Direct Flight to Australia.

First Direct Flight Cairo to the Cape.

The Flights of Survey to India, Australia and round Africa by Sir Alan Cobham.

Mr. Bert Hinkler's 15½-day Flight to Australia.

The World Flights of the Marquis de Pinedo.

The 35,000 Miles World Flight by Capt. Costes and Lieut. Le Brix.

The Air Altitude Record (12,739 metres by Herr Neuenhofen, May, 1929).

The Air Speed Record (318.8 m.p.h. by Comdr. Bernardi, March, 1928).

The Air Long Distance Record.

(4,860 miles from Rome to Brazil, by Capt. Ferrarin and Comdr. Del Prete, July, 1928).

All over the World, when only the best will stand the test, they choose—

WAKEFIELD



—the Product of an All-British Firm.

STAND No. 71
International Aero Exhibition.

C. C. WAKEFIELD & CO., LTD., Wakefield House, Cheapside, London, E.C.2.

Save time by using the Air Mail.

At last! a perfect braking system.



PALMER AIRCRAFT BRAKES

SHORTER TAKE-OFF AND LANDING RUNS.

The problems connected with intentional or forced landings in confined spaces or on sloping ground are satisfactorily solved by the introduction of PALMER AIRCRAFT BRAKES, in which the disadvantages accompanying all previous braking systems have been overcome. In addition to shortening landing runs, their most obvious effect, they also enable the take-off to be reduced, since the engine can be run at greater speed whilst the brakes are on.

LIGHTER AND EASIER TO OPERATE.

Because PALMER AIRCRAFT BRAKES are the consequence of long and careful research, with only the needs of aircraft in view, their utility extends to every type of machine. One of the great drawbacks of the car-type brakes, hitherto the only kind available, is excessive weight; PALMER AIRCRAFT

BRAKES possess the necessary lightness, and, with this lightness, they are characterised by a responsiveness and ease of control that every flying man will appreciate. Merely depressing a pedal with the foot results in the inflation of an air tube, whereby the brake blocks are brought into contact with the wheel-drum; the feel of the brake is obtained and the pressure regulated with no more effort than that required to operate the accelerator pedal of a car, even for the maximum braking effect.

SAFER—ALSO TROUBLE- PROOF.

PALMER AIRCRAFT BRAKES eliminate the dangers to life and machine which accompany landings made in confined spaces. They simplify steering on the ground, irrespective of whether the engine is running or not. Their construction and method of action make it impossible for them to seize; distortion does not impair their efficiency. They are light, easy to install and require very little attention, as it is a very simple matter to replace worn brake blocks.

**PALMER AIRCRAFT BRAKES ARE A BRITISH
INVENTION OF BRITISH MANUFACTURE.**

Stand No. 45, Olympia, July 16th to 27th.

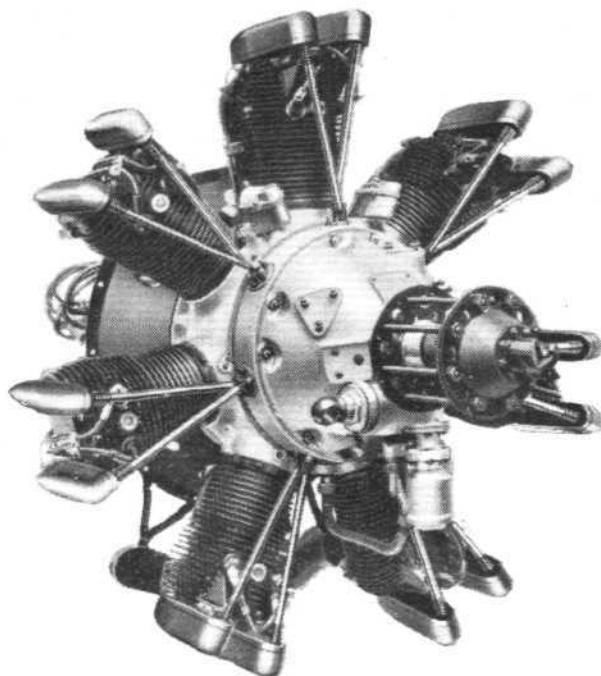
THE PALMER TYRE, LTD., 100-106, CANNON STREET, LONDON, E.C.4.

(585)

Kindly mention "Flight" when corresponding with advertisers.

ARMSTRONG SIDDELEY

AN INTERNATIONAL REPUTATION



THE Lynx engine has an international reputation for reliability. Again and again it is chosen against all comers for powering the Commercial aircraft of the principal European Air Lines. It is chosen because it has proved its durability under the most difficult conditions.

For safe and paying Commercial flying specify the Lynx as used by the K.L.M., Nederlandsche-Indische Luchtvaart Maatschappij, Compagnie Aerienne Francais, Avio Linee Italiane S.A., Ad Astra Aero Schweizerische, Luftver Kehro Ag and Balair Basle Airtraffic Ltd. airlines.

AERO EXHIBITION

STAND

OLYMPIA

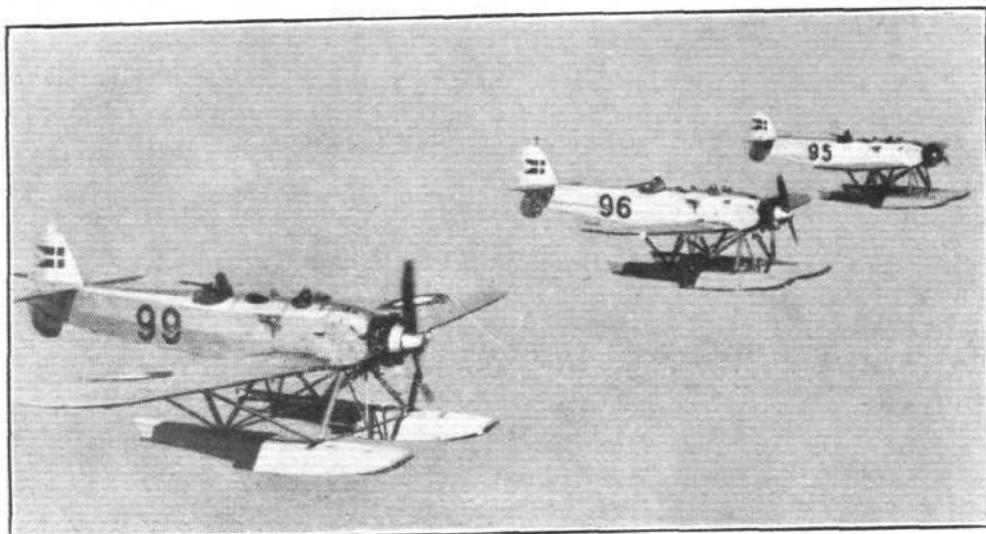
JULY 16TH TO 27TH

86

ARMSTRONG SIDDELEY MOTORS LIMITED

Head Office and Works: Coventry. London: 10 Old Bond Street, W.1

ARMSTRONG SIDDELEY



GREAT FLIGHT BY GEARED JAGUARS



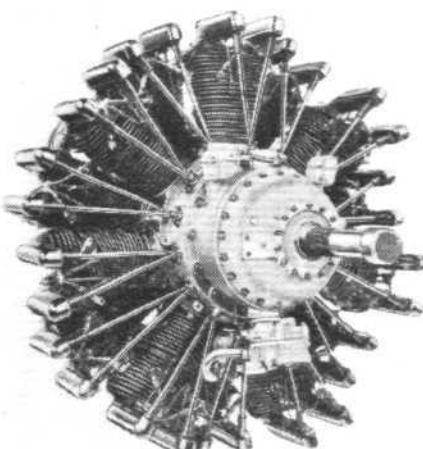
FLIGHT of Heinkel seaplanes fitted with 460-500 h.p. Geared Jaguars recently flew from Denmark to Barcelona and back. At the end of the flight it was stated "the engines ran like a clock the whole way."

Geared Jaguars are being used on the latest Imperial Airways Airlines. For greatest smoothness and best performance specify the

GEARED
JAGUAR

14 cyls.

460-500 H.P.



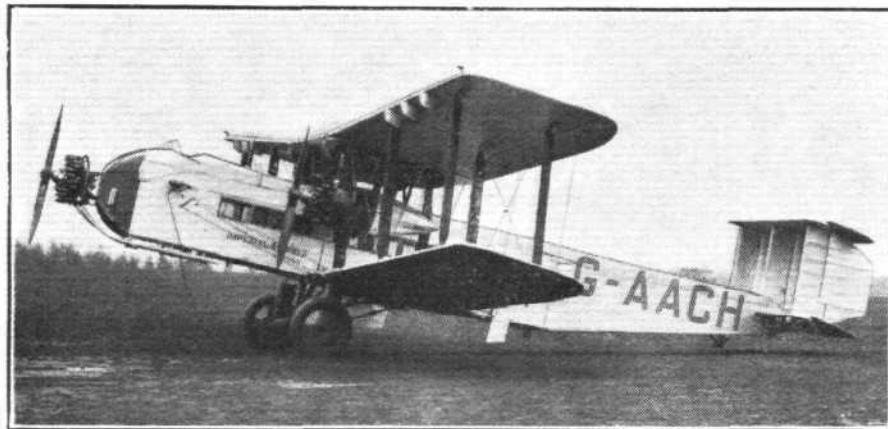
AERO EXHIBITION
OLYMPIA
JULY 16TH TO 27TH

STAND

86

ARMSTRONG SIDDELEY MOTORS LIMITED
Head Office and Works: Coventry. London: 10 Old Bond Street, W.1

ARMSTRONG WHITWORTH ARGOSIES



3 YEARS. 7,000 HOURS. 630,000 MILES

THESE are the figures for the Armstrong Whitworth Argosies on the London-Paris Airway.

During this period the Armstrong Whitworth Argosies — fitted with three Geared Jaguar engines — have surpassed all expectations for reliability, durability and low cost of upkeep AND ARE STILL IN PERFECT CONDITION. For safe and profitable flying specify the Argosy. Enquiries invited

LEADING FEATURES

Cruising Speed	95 m.p.h	152 k.p.h
Air Endurance	3½ hours	
Useful Load	5,000 lbs.	2,273 kgs.
Petrol	250 gallons	1125 litres
Oil	21 gallons	94.5 litres

AERO EXHIBITION
OLYMPIA
JULY 16TH TO 27TH

S T A N D
87

SIR W. G. ARMSTRONG WHITWORTH AIRCRAFT LIMITED
Works and Aerodrome: Whitley, Coventry. London: 10 Old Bond Street, W.1

ARMSTRONG WHITWORTH



THE ALL STEEL ATLAS (ON WHEELS, FLOATS OR SKIS)



THE all-steel Atlas is the best aircraft for land or sea reconnaissance.

It is the standard Army Co-operation two-seater of the Royal Air Force.

Its steel construction accounts for its unrivalled durability and ease of maintenance. Fitted with the world-famous Armstrong Siddeley Jaguar engine (plain or geared type), its speed, climb and ceiling fulfil the severest Service requirements. It is produced on the grand scale by the best equipped aircraft works in Europe.

PERFORMANCE FIGURES

ATLAS WITH JAGUAR ENGINE AND TOWNEND RING

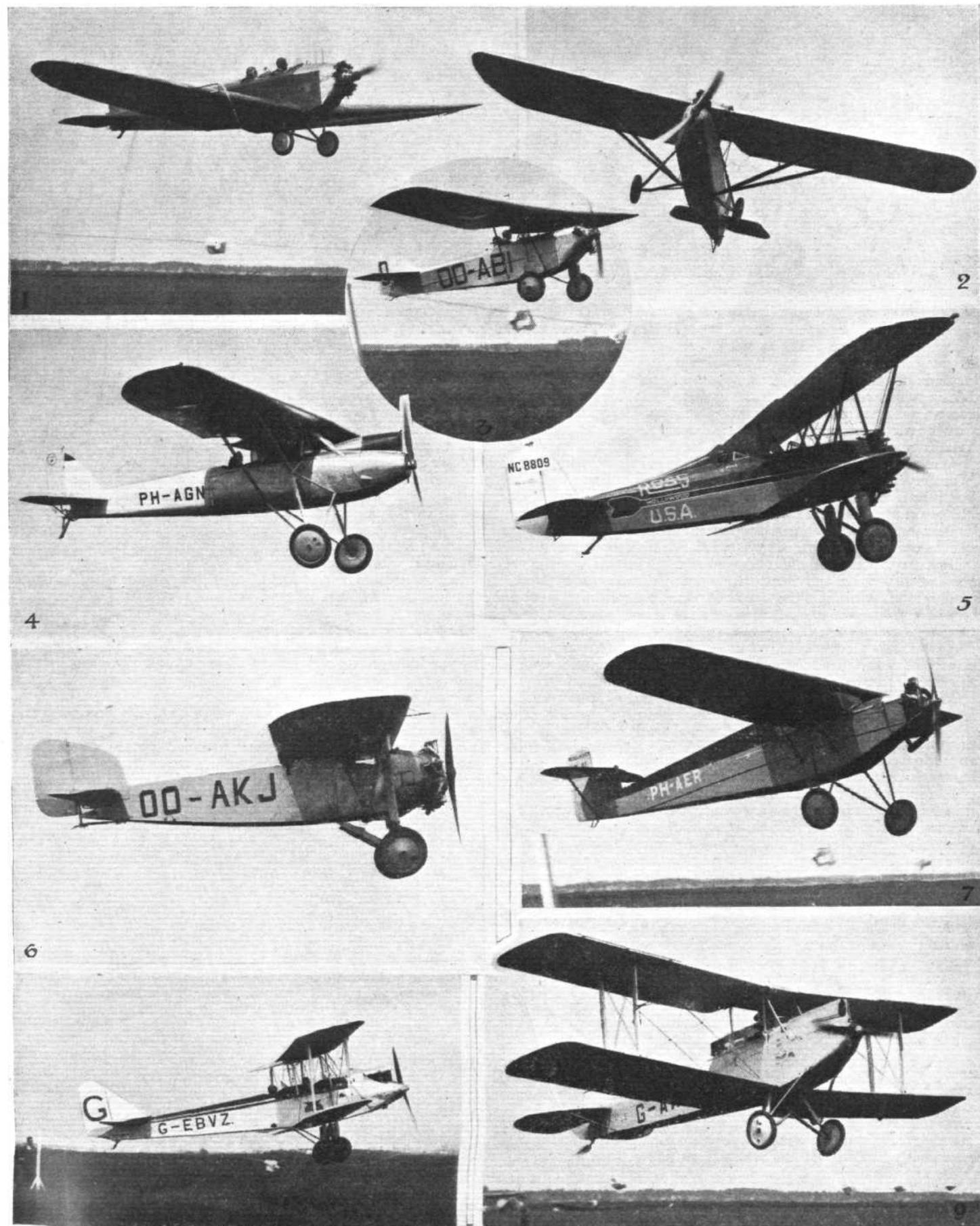
Fuel, 75 gallons (337.5 litres). Oil, 7 gallons (31.5 litres). Military Load, 880 lbs. (400 kgs.)

	Plain Engine.	Geared Engine.		Plain Engine.	Geared Engine.
Approx. total weight	4000 lbs.	4115 lbs.	Time to	5000 ft.	5.25 minutes
	1820 kgs.	1870 kgs.	" "	10000 ft.	12.5 "
Speed at ground level	143.5 m.p.h.	149 m.p.h.	" "	15000 ft.	26 "
	231 km.p.h.	240 km.p.h.	" "	1000 mtrs.	3.5 "
" " 5000 ft.	139.5 m.p.h.	145 m.p.h.	" "	3000 "	12.5 "
" " 10000 ft.	134 m.p.h.	140 m.p.h.	" "	5000 "	34 "
" " 15000 ft.	125 m.p.h.	131 m.p.h.	Absolute Ceiling	19000 ft.	19100 ft.
" " 1000 metres	226 km.p.h.	236 km.p.h.		5800 metres	5830 metres
" " 3000 metres	216 km.p.h.	225 km.p.h.	Service Ceiling	17300 ft.	17700 ft.
" " 5000 metres	193 km.p.h.	204 km.p.h.		5280 metres	5400 metres
Maximum allowable R.P.M. 2200. Normal R.P.M. 2000					

AERO EXHIBITION, OLYMPIA. JULY 16 to 27. STAND 87

SIR W. G. ARMSTRONG WHITWORTH AIRCRAFT LIMITED
Works and Aerodrome: Whitley, Coventry. London: 10 Old Bond Street, W.1

TYPES AT ROTTERDAM.



GETTING THEM DOWN AT WAALHAVEN: Various styles of landing over the tape are shown above.
 1. Bö's on Klemm-Salmson. 2. Cazalet on "Cirrus-Widgeon." 3. Kous on St. Hubert-Walter. 4. Schmit Crans on "Gipsy-Pander." 5. Hadley and Loomis on Stearman. 6. A Belgian R.S.V-Renard. 7. Koolhoven F.K.41.
 8. Miss Brown, "Cirrus-Avian," and 9. Lady Bailey on "Gipsy-Moth." (FLIGHT Photos)



THE BRITISH TEAM (including two Americans) AT ROTTERDAM. In the group will be recognised Sir Sefton Brancker, who arrived by air. (FLIGHT Photo.)

One of the "unknown heroes" of the meeting was Mr. Richardson, who, although 67 years of age, and having but recently learnt to fly, took his little Klemm-Salmson in a direct flight across the North Sea from Norwich to Waalhaven!

During Saturday afternoon the Prince Consort arrived at Waalhaven, and made a tour of inspection of the competing machines, being conducted by Mr. Kolff, President of the Rotterdam Aero Club, and other officials of the meeting.

Olieslagers, the famous Belgian pioneer pilot, arrived in a Belgian Handley Page, and was accorded an ovation.

The "thrillers" of the day were supplied by Schmit Crans, who stunted the very fast little "Gipsy"-engined Pander monoplane (which is reputed to do 130 m.p.h.), and by Capt. Versteegh's squadron which, as usual, gave a display of formation flying of a quality which is not seen elsewhere than in Holland, outside Great Britain. One of the machines had "fire on board" at the start, and had to remain on the ground.

In the evening there was night flying until 11 p.m., Schmit Crans giving a very fine display of stunting in the little Pander club machine, which looked most effective in the beams of the searchlights. A K.L.M. Fokker was busy teaching passengers "darkness and composure" by flying them over Rotterdam and district. Some 35,000 visitors paid for admission to Waalhaven on Saturday.

A notice had been posted which stated that at the Weimar (where this year all competitors, officials and others connected with the meeting were the guests of the Rotterdam Aero Club) a floor and a band had been engaged, and that "there would be no closing time." As far as one could discover, there wasn't!

Sunday morning commenced with the take-off tests, which consisted of two parts: In the first, the machines started from standing start and took off in the shortest possible run. In the second part they had to clear a tape 10 ft. high, the run permitted being one-and-a-half times the distance measured in the first part. This proved an interesting test, just about right up to each machine's capacity and was undoubtedly a feather in the cap of Dr. Wolff, who suggested this test. Many machines did extremely well in this competition, among them being Lady Bailey on her "Gipsy-Moth," Flying Officer Shaw, on a similar machine, Gough and Surtees on "Avian" G-EBXE, and Koolhoven, who "hoisted" his F.K.41 with the best of them. The best take-off of all seemed to be that of Mr. "Harold Brooklyn" on "Genet-Widgeon," who was ultimately declared winner.

The final of the relay race became an international event, Great Britain being represented by Lady Bailey and Jackaman on "Gipsy-Moths" and Mr. Richardson on "Cirrus-Moth" G-EBPQ. Belgium was represented by two R.S.V. biplanes with Renard engines and by the St. Hubert-Walter, while two Pander biplanes and one Pander monoplane ("Gipsy") upheld the honours of Holland.

After an exciting fight Richardson came in first on "Cirrus-Moth" while the "Gipsy-Pander" monoplane just managed, by its high speed, to beat the Belgian O-OAKA to second place. Result: Great Britain first, Holland second, and Belgium third.

The speed competition, held over a triangular course of

some 12 miles, was won by Lammertz on the "Gipsy"-engined Pander monoplane, which is undoubtedly a very fast machine, and was handled well.

During the day a lighter touch was imparted by items such as "bombing the baby" (the baby being a rider with a "baby face" mask over his face, mounted on horseback) and towing the Espenlaub glider. The latter proved rather a "tame" affair. A balloon "strafing" competition was rather interfered with by a high wind.

Flying Officer Shaw went up on "Gipsy-Moth" G-AAGS and did some low stunting, his loops being finished something like 20 ft. above the aerodrome!

At the finish of the proceedings the prizes were presented to the various winners by General Snyders, whose years seem to have no effect whatever upon his sprightliness. General Snyders is, we believe, well over 70, but in all but years is a young man of 40 or so. Speaking in English General Snyders delivered a most eloquent address. Particularly did he compliment Lady Bailey on her wonderful flight to Africa and back.

In the evening there was a banquet at the Weimar, and thus ended one more memorable Rotterdam Meeting. How Great Britain is ever to repay the hospitality of our Dutch hosts is a problem which leaves one not a little worried.

The Final Results

Formulae entering largely into the competition, the final classification at the end of the Rotterdam meeting was slightly delayed, and the official results could not be obtained by our representative before he left for London. It is, however, believed that the following placing of competitors is correct.

In the Rally: Mr. Carberry, 1st on "Gipsy-Moth"; Mr. Law, 2nd on "Cirrus II-Moth"; Mr. Cazalet, 3rd on "Cirrus II-Widgeon."

The relay race resulted in the English team—Lady Bailey, Mr. Jackaman and Mr. Richardson—getting first place, with the Dutch team second, and the Belgian team third.

The speed contest was won by Lammertz on "Gipsy-Pander," and in the take-off test Böls on Klemm-Salmson tied with "Harold Brooklyn" on "Genet-Widgeon."

In the main competition the position was: 1st, Jackaman ("Gipsy-Moth"); 2nd, "Harold Brooklyn" ("Genet-Widgeon"); and 3rd, Mr. Carberry ("Gipsy-Moth"). Lady Bailey (Coupé-Moth) was 4th.



The only French Visitor : The Delanne type 11 coupé monoplane, piloted by Descamps. (FLIGHT Photo.)

Westland
Rolls-Royce
Wizard



ROLLS-ROYCE

AERO ENGINES

ROLLS-ROYCE LTD: 14-15 CONDUIT ST. LONDON, W.I.

Save time by using the Air Mail.



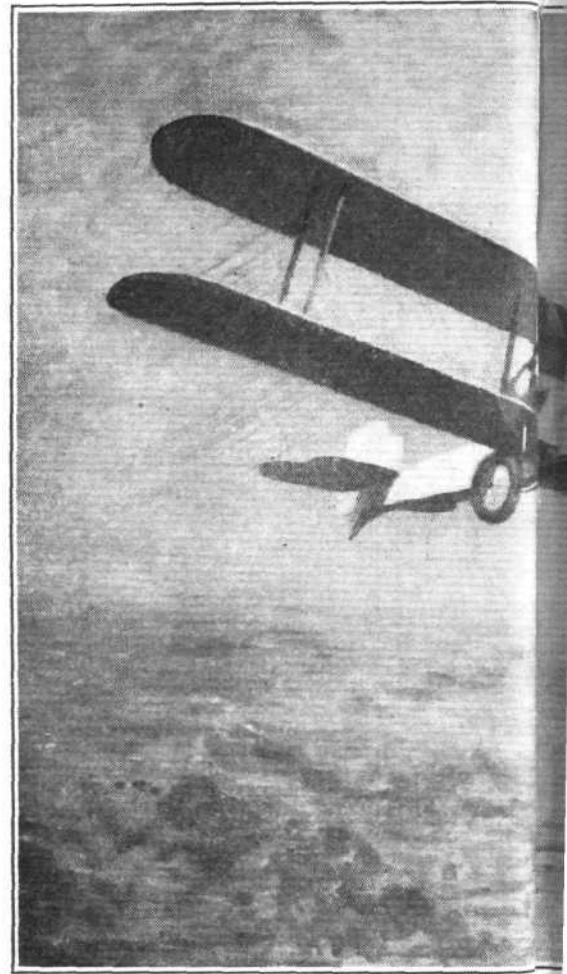
GLOSTER

DESIGNERS & BUILDERS OF THE FITTEST AIRCRAFT

"The value of air survey is now widely recognised as a method of rapidly plotting the main topographical features of new countries, or of simplifying the work of making close surveys of partly developed areas. Great Britain, which to-day has established a lead in this highly technical combination of air photography and the ground surveyor's art, has now produced a special air survey aeroplane which will still further enlarge the scope of this new science. . . . The new aeroplane will be shown at the Aero Exhibition at Olympia this month, and once it is in active commission considerable savings will be possible in the present contract periods for extended air surveys."

The Times.

INTERNATIONAL
AERO
EXHIBITION
OLYMPIA
LONDON, JULY 16-27.



GLOSTER SURVEYORS

STANNO.

THE PIONEERS OF STEEL
AIRCRAFT :: :: :: :: :: ::
14 YEARS' EXPERIENCE ::

See the R.A.F. Display

Kindly mention "Flight" when corresponding with advertisers.

TER

URVEY MACHINE IN THE WORLD.



"The war gave Gloucestershire a new industry, which has remained with it, and has of late seen notable developments. Here, in the heart of a beautiful country under the green rolling Cotswolds, metal wings for many types of aeroplanes besides the well-known 'Glosters' are made. . . . The inside of the Gloster factory is exceptionally interesting because of the great variety of types seen in various stages of construction, and because of the big batches of wings for types not designed nor erected here. Almost endless strips of high tensile steel are to be seen passing into huge machines and emerging with rolled top and bottom flanges. They are used for building up light but immensely strong wing spars."—*Daily Telegraph*.

MANUFACTURERS OF AND
SOLE LICENSEES FOR THE
GLOSTER HELE-SHAW-
BEACHAM VARIABLE
PITCH PROPELLERS.

MACHINE.

GLOSTER AIRCRAFT Co. Ltd.

SUNNINGEND, CHELTENHAM.

GLOSTER WORKS AND AERODROME,

BROCKWORTH, GLOS.

THE STEEL WING
Co., Ltd.

July 13th, 1929.

Save time by using the Air Mail.



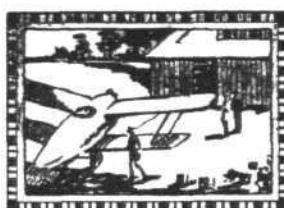
- 1** *The only Solo Atlantic Flight
(Lindbergh)*
- 2** *The only woman to cross the Atlantic
by Aeroplane (Miss Earhart)*
- 3** *The Schneider Trophy — the Blue
Riband of the Air*

on



T.K. McC.

PRIVATE



FLYING

A Section of FLIGHT in the Interests of the Private Owner, Owner-Pilot, and Club Member

LONDON TO CHINA BY LIGHT 'PLANE

"Cirrus-Avian's" 9,800 Mile Flight

[The recent flight to China by Mr. Wen Lin Chen and Mr. Johannsen, a Dane, is here described by Mr. R. Vaughan-Fowler, of the Far-East Aviation Company, Hong Kong.—ED.]

ONE of the most remarkable flights of recent years was successfully concluded on May 12 at Amoy, China, when Mr. Wen Lin Chen reached that port shortly after three o'clock, having successfully completed the last stage from Canton. News of his expected arrival had reached Amoy by telegram, and many officials and local residents assembled at the aerodrome to welcome him. About three o'clock the "Cirrus" engine was heard; shortly after the "Avian" came into sight flying at about 1,000 ft., and flew over the town and then landed at the Amoy Naval Aerodrome, having previously circled over the spectators. The landing was exceptionally slow, the machine coming to rest in 40 or 50 yards, according to those present.

Mr. Chen's flight companion was Mr. Christian Johannsen, a Danish aviator of many years' experience, and throughout the flight, he had shared the piloting. Between them they had attended to the running repairs of the machine. Mr. Chen told me that these repairs had never exceeded the usual daily inspections, cleaning of plugs and filters, and adjustment of tappet clearances. Owing to the tropical rains through which they had to plough their way, two propellers became damaged, and these had to be changed, but, as he said, these replacements were only made to keep the machine in perfect condition.

Purpose of the Flight

The object of the flight was not to make records. Mr. Chen wished to visit many places in Europe on business, and he wisely decided that his best method would be to use one of the four "Cirrus-Avians" he had purchased in England. He set out from Croydon early in March without any fuss, and, passing through Germany, Egypt, and Persia, eventually arrived in India. There bad luck overtook both airmen. They were taken ill with malaria, and had to spend nearly two weeks in hospital. On recovering, they proceeded across India to Rangoon, and remained there four days to enable Mr. Chen to visit his mother.

From Rangoon the flight was continued across French Indo-China to Hanoi, and from there Mr. Chen decided to fly via Pakhoi and Canton to Amoy as quickly as possible, in view of the trouble in Kwangtung and Kwangsi. Only short visits were made in these last ports of call, Mr. Chen leaving Hanoi at 6.30 a.m. on May 10 to reach Canton on the 11th and Amoy on the 12th.

Personal Impressions

I visited Amoy specially to meet Mr. Chen, but my boat arrived the day after, and I was unable to carry out my original intention of actually meeting him on arrival. However, soon after landing I was lucky in obtaining a long interview with him. My first impression of him was that he was very young. He informed me that he was 28, but he looked much younger. He speaks perfect English as well as German.

I asked him how he liked the "Avian," and the "Cirrus" Mark III engine, and he said that he considered them first class productions. Both had given excellent service under all kinds of conditions. When leaving Europe they had experienced low temperatures, whilst in Persia and India the heat had been tremendous. The "Cirrus" had worked well under these extreme conditions. Throughout the flight Shell petrol and Golden Shell oil had been used, the consumption of petrol being approximately 5 gallons of petrol per flying hour, which was very economical considering that the "Avian" was carrying a very heavy load and the engine had been running at 1,800 r.p.m. cruising. Mr. Chen was enthusiastic in his praise for the service he received at all landing places from Shell representatives.

Mr. Chen is head of Naval Aviation in Amoy. He decided to continue his flight to Foochow, Shanghai and Nanking

after paying attention to the erection of the three other Avro "Avians" which he had purchased, one of these being a seaplane, all fitted with the "Cirrus" Mark III engine. He will eventually return to Amoy, to train Chinese pilots.

Mr. Chen said that his machine "Amoy," even after its long flight, required no serious attention. The "Amoy" is doped silver with Titanine dope, specially prepared to protect the fabric from tropical sun and damp. On inspection, the wings were found to be as tight as drums, which showed that this system of doping is correct in practice as well as theory. K.L.G. plugs and British Thomson Houston magnetics were used throughout.

Mr. Chen spoke highly of his friend Mr. Johannsen, whose many years' experience and unfailing energy had contributed largely to the success.

I learned from other sources that Mr. Wu, a prominent Chinese resident of Amoy, was responsible for the finance of the flight. If this is correct, and I have reason to believe that it is, Amoy naval aviation owes Mr. Wu a great debt of gratitude.

We would ourselves add one or two items of interest to this account of the flight. The two airmen found excellent landing grounds, we believe, all the way through. This is as expected in one respect because they were on the established route at certain times, such as the stage through the Middle East and down the Persian Gulf.

Mr. Chen holds a very high position in his country's aviation service, so that his successful flight has a special significance, and it is expected to prove of great value to the interests of Chinese aviation, to which, incidentally, America is trying hard to attach itself.

The Avro "Avian" and "Cirrus" engine could not have made a more auspicious entry.



Mr. Wen Lin Chen (left) and Mr. C. Johannsen, with the Cirrus-Avian in which they flew from England to China recently, covering over 9,000 miles without any trouble. The machine and other Avians are to be used for training purposes in China.

A VERY SUCCESSFUL FLYING CLUB

Norfolk and Norwich Club's Profit

ONE has often noticed that to raise the question of the economic stability of flying clubs with an expert on the subject, produces a wry expression. Recently one was personally informed by a most experienced and shrewd club instructor that only one club in this country could possibly attempt existence without the subsidy under the present economic conditions relative to aviation. Even with the subsidy, which no club can take maximum advantage of, solvency is considered a hazardous task. The financial reports from clubs are not all brought forward prominently, so that an exception is often in the nature of a revelation on the present position.

The Norfolk and Norwich Aero Club recently revealed their financial condition at the second annual meeting at Norwich; and, bearing in mind, of course, that it is built upon the subsidy, the result is satisfactory.

Mr. A. A. Rice (Chairman of the Club) presided, and the President, Mr. H. N. Holmes, was also present, in addition to a number of members and supporters of the club. Before beginning business the Chairman made a presentation to one of their directors, who has worked very hard for the club—Mr. Gough. A large number of the members were so impressed with Mr. Gough's work that they had raised a subscription list in order to provide him with some tangible token of their esteem.

Mr. A. A. Rice, in presenting the third annual report of the directors, and the accounts, said the membership, which stood at 162 for the year 1927-28, had increased to 384 for the year 1928-29. After writing off £494 for depreciation, the accounts showed a profit of £17 on the year's working. It was well to remember that it had been made possible

chiefly by the income derived from the Government subsidy, the income from that source during the year amounting to £1,201. The club had no serious accident throughout the year, and when one remembered that they had put in 846 hours' flying, much of it in bad weather, including a number of extensive cross-country flights, it would be realised that they had something to be grateful for.

Under Article 6, the first 250 members were admitted without payment of an entrance fee. Now that the number had been passed the Council had decided to charge an entrance fee to all new members of £3 3s. for flying members and £1 1s. for associates. They had three aeroplanes—two D.H. Moths and an Avro-Avian—in addition to which they had four private owners who used the aerodrome and club facilities. So far as the future of the club was concerned, the council felt that owing to the impending production of cheaper aircraft the club would face many problems, especially in regard to its private owners. To mention but one, it was quite probable that the Management Committee would have to consider the question of increased hangar accommodation. Then again, the City Council, which had a claim on the aerodrome, was interested in developing the city as an air port, and they would, in the future, have discussions with them in which their position with regard to the aerodrome might be involved. There was no reason, however, to think that so far as the aerodrome was concerned they would be placed in a less fortunate position in the future than in the past. It was hardly necessary to remind themselves that in the aerodrome they had not only one of the best in the country, but most certainly the cheapest.

Mr. A. A. Rice was again elected Chairman.

LIGHT 'PLANE CLUBS

London Aeroplane Club, Stag Lane, Edgware. Sec., H. E. Perrin, 3, Clifford Street, London, W.1.

Bristol and Wessex Aeroplane Club, Filton, Gloucester. Secretary, Major G. S. Cooper, The Aerodrome, Patchway, Glos.

Cinque Ports Flying Club, Lympne, Hythe. Hon. Secretary, R. Dallas Brett, 114, High Street, Hythe, Kent.

Hampshire Aero Club, Hamble, Southampton. Secretary, H. J. Harrington, Hamble, Southampton.

Lancashire Aero Club, Woodford, Lancs. Secretary, Mr. Atherton, Avro Aerodrome, Woodford.

Liverpool and District Aero Club, Hooton, Cheshire. Hon. Secretary, Capt. Ellis, Hooton Aerodrome.

Midland Aero Club, Castle Bromwich, Birmingham. Secretary, Maj. Gilbert Dennison, 22, Villa Road, Handsworth, Birmingham.

Newcastle-on-Tyne Aero Club, Cramlington, Northumberland. Secretary, John Bell, Cramlington Aerodrome, Northumberland.

Norfolk and Norwich Aero Club, Mousehold, Norwich. Secretary, G. McEwen, The Aerodrome, Mousehold, Norwich.

Nottingham Aero Club, Hucknall, Nottingham. Hon. Secretary, Cecil R. Sands, A.C.A., 30, Park Row, Nottingham.

The Scottish Flying Club, 101, St. Vincent Street, Glasgow. Secretary, George Baldwin, Moorpark Aerodrome, Renfrew.

Southern Aero Club, Shoreham, Sussex. Secretary, Miss N. B. Birkett, Shoreham Aerodrome, Sussex.

Suffolk Aeroplane Club, Ipswich. Secretary, Maj. P. L. Holmes, The Aerodrome, Hadleigh, Suffolk.

Yorkshire Aeroplane Club, Sherburn-in-Elmet, Yorks. Secretary, Lieut.-Col. Walker, The Aerodrome, Sherburn-in-Elmet.

BRISTOL & WESSEX AEROPLANE CLUB, LTD.

(JUNE 23-29).—Pilot instructor: E. W. B. Bartlett. Ground engineer: A. W. Webb. Machines in commission (2): TV, YH. Flying time for the week: 46 hrs. 35 mins. Pupils instructed and hours flown (13): 18 hrs. 35 mins. Soloists and hours flown (2): 5 hrs. 20 mins. Licensed pilots and hours flown (11): 14 hrs. 45 mins. Passengers carried and hours flown (9): 3 hrs. 50 mins.

We have had a very busy week during which one single day's flying record has again been broken with 14 hrs. 40 mins. With one instructor and two machines we are proud of this. We were glad to see Capt. Fielden with Miss Spooner in Capt. Guest's "Junkers" machine, who called on their way round the King's Cup course. Mr. C. T. Holmes has again been assisting us with instructional work, much to the club's advantage. We shall very much miss our friends across the aerodrome when we move to our new home on the Municipal Aerodrome. Mr. W. H. Amory did his first solo this week.

HAMPSHIRE AEROPLANE CLUB

(JUNE 22-28).—Pilot instructors: Flight-Lieut. F. A. Swoffer M.B.E., and Mr. W. H. Dudley. Ground engineers: Messrs. E. Lenny, S. Riches and J. Elliott. Aircraft: D.H. 60 Moth, G-EBOH and Spartan G-AAFR. Flying time, 32 hrs. 15 mins. Pupils under instruction (21): 17 hrs. 50 mins. Soloists (8): 3 hrs. 15 mins. "A" pilots (9): 8 hrs. 15 mins. Passengers (5): 1 hr. 30 mins. Instructor's solo and tests (9): 1 hr. 25 mins.

Messrs. Crawford and Elkins have joined the club this week. Messrs. Mariner and Gibbs completed successful first solos.

HOUSEHOLD BRIGADE FLYING CLUB

THE Landing Competition for the Gwynn Madocks Cup will take place at Heston Aerodrome at 2.30 next Saturday, July 6. Members and friends with voucher tickets will be admitted free to the aerodrome. Lunch (3s. 6d.) and tea are available in the club house. Tables should be booked beforehand. (Tel. Hayes 410.)

The following are the entries for the "Gwynn Madocks Cup":—No. 1, A. V. Douglas, Esq., Scots Guards. No. 2, R. Quilter, Esq., late Grenadier Guards. No. 3, Captain T. Rhodes, M.V.O., late Grenadier Guards. No. 4, E. L. Donner, Esq., Irish Guards. No. 5, W. R. West, Esq., Grenadier Guards. No. 6, E. Somerset, Esq., Coldstream Guards.

The Cup will be presented after the competition by the Viscountess Elibank. The King's Cup Race round England will finish at about 4 p.m. at the

aerodrome. Members will be kept in touch with the progress of the race during the afternoon. A. S. Butler, Esq., late Coldstream Guards and Captain The Hon. F. Guest, late Life Guards, are two members of the Household Brigade Flying Club competing in the King's Cup Race.

LANCASHIRE AERO CLUB

(JUNE 23-29).—Flying time: 34 hrs. 25 mins. Instruction (20): 11 hrs. 25 mins. Solo flights (23): 16 hrs. 20 mins. Passenger flights (17): 4 hrs. 30 mins. Tests (13): 2 hrs. 10 mins. Instruction (with Mr. Hall): Shaw, Stross, Greg, Ashworth, J. H., Ashworth W., Dane, Miss Baerlein, Boon, Sellers, Dewhurst, Riley, Russell, Harrison, Barlow, Taylor, S., Foote, Williamson; (with Mr. Scholes): Lister, Machines in commission: QL, XD, EC. Soloists (under instruction): Greg, Lister, Sellers, Russell, Barlow, Foote. Pilots: Ruddy, Ashworth, W., Davies, R. G., Miss Baerlein, Lacayo, Gort, Weale, Whitehouse, Hall, R. F., Gattrill, Harrison, Mills, Goss, Williamson. Passengers (with Mr. Scholes): Stiffs, Mrs. Stubbs, Booth; (with Mr. Ruddy): Cahert; (with Mr. Gort): Melville, Mills; (with Mr. Hall): R. F. Harrison, Weale; (with Mr. Harrison): Hall, R. F.; (with Mr. Hall): Miss Johnson, Warburton; (with Mr. Lacayo): Mrs. Pitt; (with Mr. Gattrill): Constant, Kelly; (with Mr. Mills): Harrison; (with Mr. Williamson): Miss Harrison; (with Mr. Williams): Hazlewood.

Private owners and clubs are reminded that on July 5 and 6 The Lancashire Aero Club is holding an informal flying meeting in connection with the visit of the King's Cup competitors for the night.

Competitive events of the nature of balloon-bursting, taxiing competition, obstacle races and aerial golf will be held from 2 to 5 p.m. each day. Visiting pilots will as far as time permits be allowed to enter on arrival and will be made welcome.

It is requested that aerial visitors will avoid arriving at Squire's Gate between 5 and 8 p.m. on Friday, on account of the arrival of the King's Cup Competitors between these hours.

LIVERPOOL & DISTRICT AERO CLUB

(JUNE 23-29).—Machines in commission: Avians XX, XY, ZM. Instructor: Flight-Lieut. J. B. Allen. Ground Engineers: Messrs. H. Pixton and M. Mason. Total flying time: 54 hrs. 40 mins. (a club record). Pupils, Dual: (28) 27 hrs. Pupils, Solo: (9) 6 hrs. 45 mins. "A" Pilots, Solo: (14), 17 hrs. 30 mins. Passenger flights: (7), 2 hrs. 15 mins. Test flights: (11) 55 mins.

FIRTH AIRCRAFT STEELS

ALLOY STEELS FOR EVERY PURPOSE

THERE is a Firth Steel for every aeronautical purpose. In addition to the honour of supplying Firth Steels for the various components of the Napier engine in the Supermarine S.5, which won the Schneider Trophy in 1927, we have also pride in the knowledge that the four Supermarine Napier Southampton flying boats which journeyed to Australia last year were even more completely equipped with Firth Special Alloy Steel engine components and flying-boat details.

We are proud in the knowledge that, in putting our best into the Special Alloy Steels used in the construction of machines which achieve such results, we are helping to further the prestige of Great Britain and her manufactures.

Ample stocks of Firth Alloy Steels conforming to Air Board Specifications S2, S3, S8, etc., are available for immediate delivery.

Visit our Stand No. C/78 at the International Aero Exhibition, Olympia, July 16-27th.

THOS FIRTH & SONS LTD SHEFFIELD

Save time by using the Air Mail.



Actual photograph taken from accompanying 'plane, at instant after man had jumped and pulled the rip cord—his Irvin is seen instantly opening.

Jump— ---- Zip !

IT'S OPEN.—You're safe! Your fall stops. You rest in mid air. And then relax.

You glide smoothly, easily groundward, sharing the long-proven confidence of certain safety that Irvin Air Chutes have bred all over the world, in the minds of men who fly—and sometimes jump.

Scores and scores know what a life saver this is, from their own wide experiences in the air.

Already more than 200 aviators have been saved by use of their Irvin Air Chutes when naught else could possibly have brought them safely down.

Among these are aviators in the Air Forces of Great

Britain, Japan, Sweden, Denmark, Poland and the Argentine Republic, as well as scores in the United States.

A number indeed have been saved in commercial operations.

Many of the emergencies were of the most extreme nature, and in every case the Irvin Air Chute functioned perfectly.

After thorough investigation and rigid comparative tests, many Governments have adopted the Irvin Air Chute as the standard life-saving equipment for their Air Forces.

If extreme emergency—all unannounced as it usually comes—suddenly confronts you in the air, will you, too, be ready to meet it with Irvin confidence?



STAND No. 11, OLYMPIA EXHIBITION.

Irving Air Chute of Great Britain, Ltd.,

Works Road, Letchworth,
Herts., England.

Telephone:
LETCHEWORTH 370.

Cable & Telegraphic Address:
"IRVIN, LETCHWORTH."

New member taking instruction: Mr. J. F. Paton. First solos: four members made excellent first solo flights this week, i.e., Messrs. W. M. S. Fox, W. B. M. Goodman, A. C. F. Anderson and W. L. Wilson. Mrs. Eills has completed her practical tests for aviator's certificate.

Cross-country flights: Mr. Davison to Woodford, with WK for overhaul. Mr. Thornton to Cambridge, with XX.

Club machines may now be booked for cross-country to approved destinations, not necessarily licensed aerodromes, if returning next day, actual flying time only being charged.

Visitors: Mr. Leeming (from Wythenshawe); Mr. Eckersley (from Blackpool).

MIDLAND AERO CLUB

(JUNE 23-29).—The total flying time was 34 hrs. 16 mins. Dual: 15 hrs. 5 mins. Solo: 11 hrs. 40 mins. Passenger: 7 hrs. 5 mins. Test: 26 mins. The following members were given dual instruction by Mr. W. H. Sutcliffe: P. B. Hackitt, H. G. Tower, T. G. E. Ellison, A. F. Hill, J. R. Bond, B. A. Vallance, T. N. Khatri, H. Coleman, N. Fisher, J. E. Yardley, A. C. Merrick, F. G. Robinson, G. Norton, R. C. Welch, F. T. Lydall, L. V. Mann, H. Beamish, J. H. Stevens, J. A. Ridsdale, N. B. Tompson. "A" Pilots: S. Duckitt, J. K. Morton, G. W. Fellowes, G. Robson, S. H. Smith, W. Swann, G. V. Perry, W. M. Morris, J. Cobb, R. L. Jackson. Soloists: H. E. Evans, T. G. Ellison, P. B. Hackitt, T. N. Khatri, K. S. Neale, Dr. W. G. Tilleke, H. Coleman, J. Hanford Stevens, R. G. Welch. Passenger flights were given to 19 members.

NEWCASTLE-UPON-TYNE AERO CLUB

(JUNE 24-30).—Instructor: G. M. S. Kemp. Engineer: W. Dunning; Assistant, J. Tait. Aircraft: (3), PT, QV, LX. Flying time: 61 hrs. 45 mins. Instruction: 25 hrs. 45 mins. "A" Pilots: 19 hrs. 15 mins. Passengers: 15 mins. Tests: 1 hr. Solo training: 14 hrs. 30 mins.

The weather has improved very considerably, so much so that we have had a record week of flying. Mr. C. Duffie has completed the tests for his "A" licence, and another member has been successfully launched on his first solo flight, Mr. W. Stoddon. New members are very slow in coming to the fore. Race week in Newcastle and district is generally noted for rain, but this year it has allowed us to do as much flying as we could.

THE NORTHAMPTONSHIRE AERO CLUB

(JUNE 16-22).—Instructor: E. F. Palmer. Ground Engineer: J. B. Gallagher. Aircraft: (2) IC and IE. Flying time: 16 hrs. 35 mins. Instruction: 8 hrs. 50 mins. Soloists: 2 hrs. 45 mins. Passengers: 2 hrs. 55 mins. Tests: 2 hrs. 5 mins.

On Wednesday, June 19, Mr. J. Jeyses and the Hon. Verney-Cave did excellent first solo on Friday, June 21. Mr. J. Linnell also went on his first solo and put up a very fine performance. This brings our total numbers of soloists up to six.

(JUNE 23-29).—Instructor: E. F. Palmer. Ground Engineer: J. B. Gallagher. Aircraft: (2) IC and IE. Flying time: 14 hrs. 5 mins. Instruction: 10 hrs. 10 mins. Soloists: 1 hr. 5 mins. Passengers: 1 hr. 5 mins. Tests: 1 hr. 45 mins.

On Thursday last we were paid a visit by Mr. Crosbie piloting the sealed Gypsy Moth G-EBTD. This engine has now completed 450 hrs. flying up to its arrival here.

In the afternoon Mr. E. Palmer flew over the Toc H Carnival at Delapre Park and gave a good display of aerobatics on the club machine IE.

NOTTINGHAM AERO CLUB

REPORT for month of June 1929.—Total flying for month: 94 hrs. 45 mins. "A" Pilots, 41 hrs. 25 mins. Soloists, 2 hrs. 15 mins. Instructor: Dual. 44 hrs. 30 mins.; tests, 4 hrs. 10 mins.; passenger, 2 hrs. 25 mins.

Ground Engineer: Mr. Francis Harley, our late ground engineer, has been replaced by Mr. Thomas Warren, an original pilot in the R.F.C., who was one of the first men in the ranks who learnt to fly, his R.A.C. certificate being No. 746. At the conclusion of the war he left the R.A.F. with the rank of

1st Class Warrant Officer—S.M.I. It is interesting to note that in the five or six months Mr. Francis Harley served with us no machine suffered a forced landing. The members wish him luck in his new appointment in Canada, and likewise good luck to Mr. Warren, our new G.E.

"A" pilots who flew during June: Messrs. Taylor, Kay, Warren, Bradley, Hutchinson, Whitby, Granger (F.), Whitby, Shipside, Wynn, Paul, Selvey, Ball, Winn and Sub-Lieut. Cliff, R.N.

Soloists (under instruction): Messrs. Cudlip, Thorpe (G. G.), Halton and two first soloists, Messrs. Gallimore and Hurst, who both completed successful solos for the first time since last flying in 1919, being old R.A.F. pilots. The former went off after 2 hrs. 20 mins. dual and the latter after only one hour's dual exactly. Mr. Hurst, it is interesting to note, is a member of the committee of the Leicestershire Aero Club.

Dual instruction was given to Messrs. Gallimore, Hurst, McWilliam, Lilley, Smith, Sail, Spiers, Cudlip, Thorpe (H. R.), Thorpe (G. G.), Nicholson, Starr, Hallam, Khanna, Hatton, Eayrs and Pierce.

Advanced dual was given to Messrs. Shipside, Bradley, Winn and Sub-Lieut. Cliff, R.N.

New members are as follows: Pilots: Gallimore, Lilley, Sail, Spiers, Thorpe (H. R.), Starr, Hallam (H. P.), Khanna, Pierce and Hurst. Observers: Mrs. Selvey, wife of our pilot member Mr. Selvey, and Mrs. Bateman, wife of our pilot instructor.

Flying: A disappointing month generally, but taking into account the fact that one machine was out of action six days and then the other four days we have no reason to be unduly depressed. Next month we hope to have something of an orgy of first soloists.

SUFFOLK & EASTERN COUNTIES AEROPLANE CLUB

(JUNE 23-29).—Aerodromes: Hadleigh, Suffolk, and Conington, Cambs. Instructors: G. E. Lowdell, A.F.M., and R. T. M. Clayton. Ground engineers: E. Mayhew and H. C. Brown. Aircraft: Bluebirds, RE, SZ, UH, and BF. Flying time: 35 hrs. 10 mins. by Suffolk and Cambridge Clubs, as follows:—

Suffolk Aero Club.—Flying time: 19 hrs. 10 mins. Nine members were given dual (10 hrs. 10 mins.). Four members flew solo under instruction (3 hrs. 35 mins.). Flights were made by five "A" and "B" Licence members (3 hrs.). Three passengers were carried (40 mins.). Twelve tests were made (1 hr. 45 mins.).

Captain Garland completed his tests for "A" Licence and Mr. Starkey performed his first solo. Sunday was a blank day, hence our reduced flying time. The club will be closed on Wednesday and open on Friday this week owing to the King's Cup.

Cambridge Aero Club.—Flying time: 16 hrs. Seven members were given dual (4 hrs. 40 mins.). Flights were made by one "A" Licence member (1 hr. 10 mins.). Five passengers were carried (9 hrs. 15 mins.). Eight tests were made (55 mins.).

The weather on Sunday prevented flying at Conington. The club is operating much more smoothly now that the shed is completed and machines are always on the spot.

FROM THE FLYING SCHOOLS

Brooklands School of Flying, Brooklands Aerodrome

(JUNE 22-30).—Flying time: 34 hrs. Pilots: Capt. H. D. Davis, A.F.C., Capt. E. A. Jones, Maj. C. M. Pickthorn, M.C., and E. Wyllie. Machines: DT, ZE, CA, EM, MV.

This week saw our Moth showroom opened and in the first two days the new Gipsy Moth was sold to Mr. G. D. Shellabcar. The school have also disposed of Mark II Moth G-EBRX to Mr. R. D. King.

Nothing of special interest has happened on the flying side this week.

Phillips and Powis School of Flying, Reading Aerodrome

(JUNE 21-27).—Flying time, 18 hrs. 5 mins. Instructors: Flg. Offr. R. T. Shepherd, Mr. H. B. G. Michlemore. Mr. A. Aggar, of Rangoon, has joined the School. He proposes to form a Flying Club at Rangoon on his return.

five years, or a first-class airship pilot's licence, or a certificate of competency as a first-class navigator of commercial aircraft. Members of the preliminary management were elected, also executive committees. Mr. Lawrence Wingfield was elected secretary. A resolution was passed signifying the willingness of the Guild to participate in the existing agreement between the Royal Aeronautical Society, the Air League, the Royal Aero Club and Society of British Aircraft Constructors.

This is the Avro "Avian" with Armstrong Siddeley "Genet" engine, which Mr. J. D. Siddeley presented to the Ottawa Flying Club, which now has two of these machines. In the group are (left to right), Capt. L. E. Maynard, Ottawa Club Instructor, Capt. M. Windsor, Canadian Manager of Armstrong Siddeley Motors, Ltd., Mr. W. L. McIntyre, General Manager of the Ottawa Car Co., which constructs Avians under licence, and Mr. L. Roberts, Club Secretary.

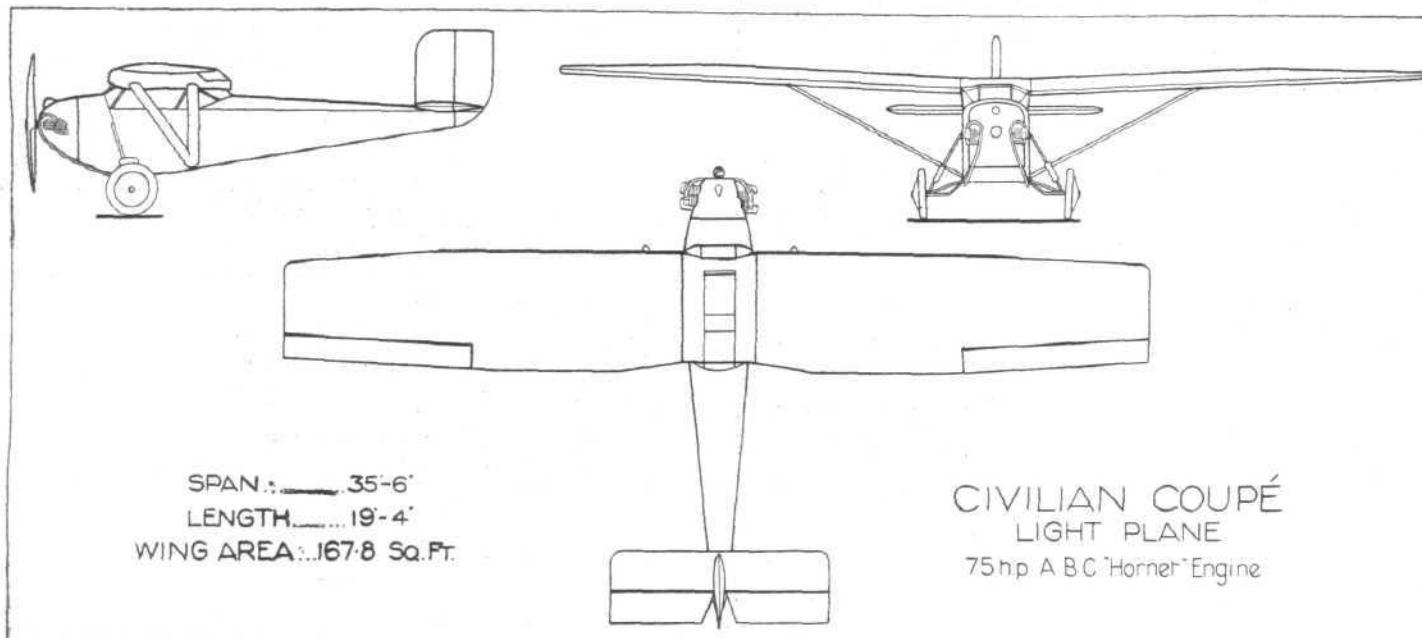


THE CIVILIAN COUPÉ

A New British Light 'Plane for the Private Owner

WE are able to give this week general arrangement drawings of an entirely new British light 'plane, which is now almost ready for its first flights. This machine, the "Civilian Coupé," has been produced by the Civilian Aircraft Co., of 27, Moor Street, Burton-on-Trent—a company that has just recently been formed to carry out experimental work in connection with a new type of Private-Owner light 'plane, and other machines.

lacquer. All controls by sliding rods. Ball bearings to all moving parts. Ball joints enclosed in leather sleeves to all chassis joints. Folding wings. Two side doors, staggered seats, detachable wind shields. Detachable engine unit, including oil tank, instrument panel and all controls, pipes, etc. Unimpeded view in all directions, including backward view when tail on ground. Very robust construction throughout, to stand hard wear.



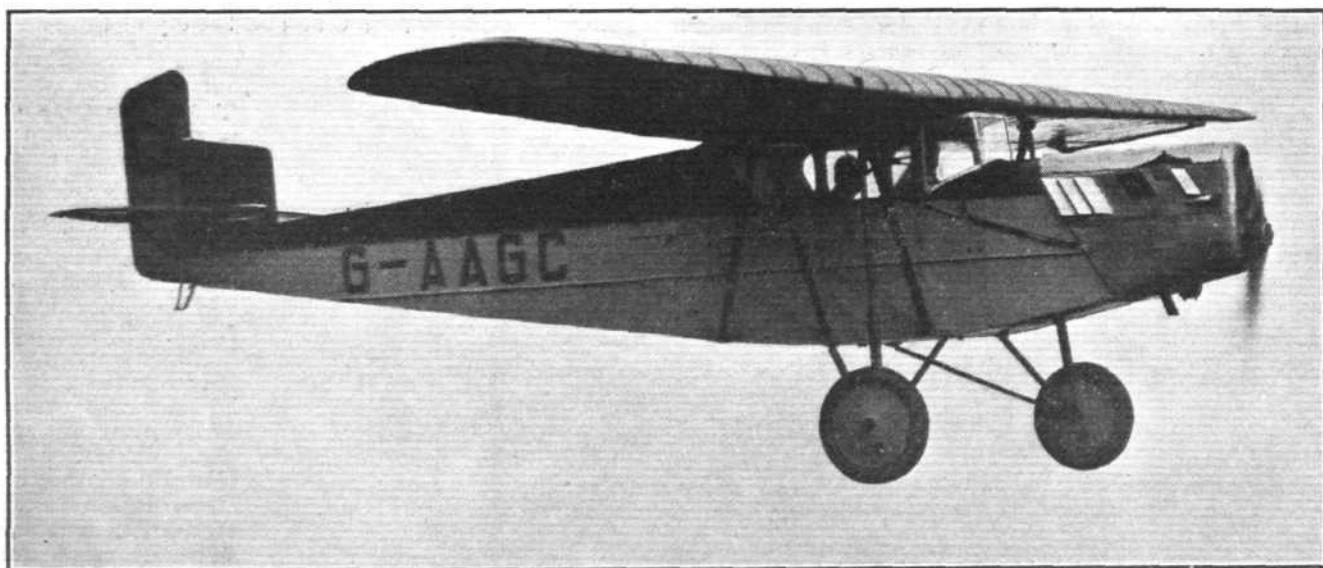
THE "CIVILIAN COUPÉ": General arrangement drawings.

The "Civilian Coupé" has been designed—specially for the Owner-Pilot—by Mr. Harold D. Boulbee, who, as no doubt some of our readers are aware, has been associated with aviation since 1909; for the last six years, for instance, he has been designing for Handley Page, Ltd. Mr. Boulbee has formed the company with the assistance of some friends in Burton, viz., Mr. T. R. Shercliff, Mr. W. B. Briggs, Mr. S. H. Buxton, and Mr. T. S. Green.

We can only give but brief particulars of this machine at the moment, but very shortly we hope to give a fuller, illustrated description. As will be seen, it is a braced high-wing two-seater monoplane, with a 75-h.p. A.B.C. "Hornet" engine. Its special features may be summarised as follows:—All 3-ply covering throughout, finished with Cerric cellulose

The principal characteristics and performance are:—

Span	..	..	..	..	35 ft. 6 $\frac{1}{2}$ in.
Chord	..	..	..	..	5 ft.
O.A. length	..	..	..	..	19 ft. 4 in.
Height	..	..	..	..	6 ft. 3 in.
Width, folded	..	..	..	..	11 ft. 2 in.
Wing area	..	..	..	..	167.8 sq. ft.
Total weight (normal)	..	..	..	..	1,560 lbs.
Weight/h.p. (normal)	..	..	..	..	19 lbs.
Weight/sq. ft. (normal)	..	..	..	..	9.3 lbs.
Speed range (apx.)	..	..	..	..	42-100 m.p.h.
Climbing speed	..	..	..	..	670 ft. off ground
Ceiling	..	..	..	..	12,500 ft.



LATEST DESOUTTER MONOPLANE: The "D.A.C. Sports Coupé" (Cirrus III). (FLIGHT Photo.)

LODGE

AVIATION PLUGS.

Lodge Aviation Plugs are made in the following models:—

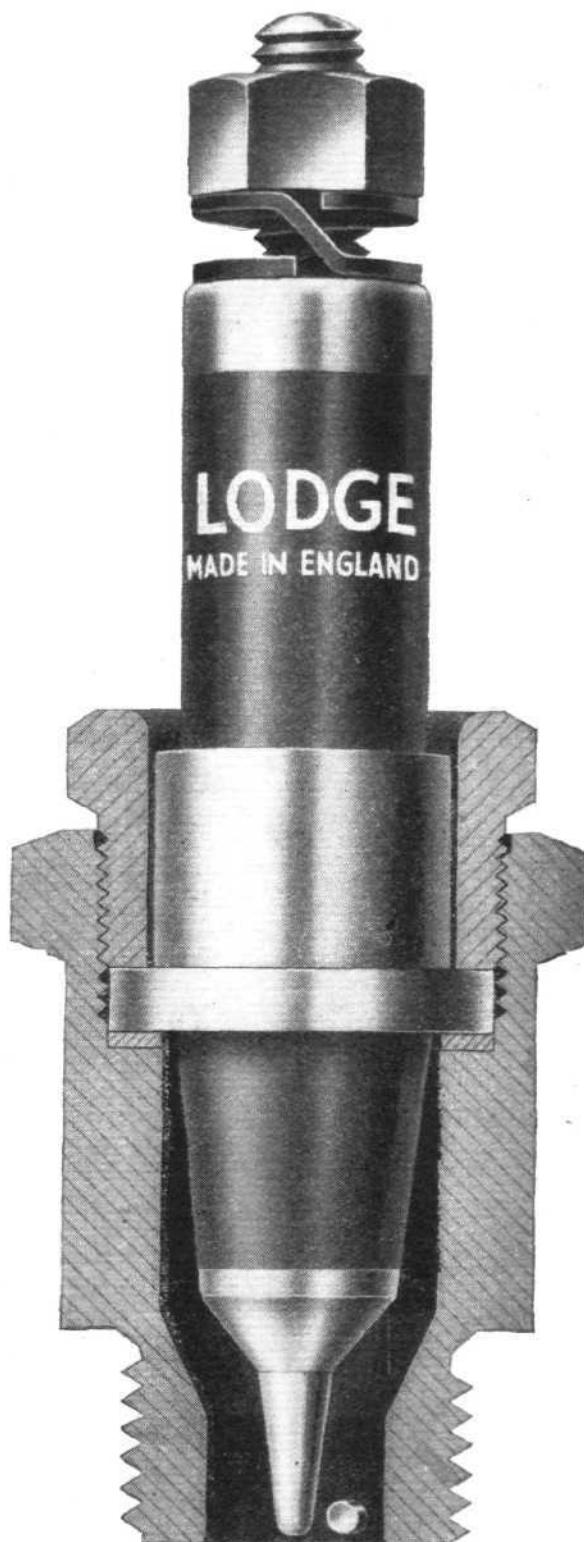
A20 11 m/m reach } for medium compression
A21 18 m/m } engines.

A30 11 m/m reach } for medium and high com-
A31 18 m/m } pression engines.

A40 11 m/m reach } for engines of exceptional
A41 18 m/m reach } output such as Rolls F.XI.

A characteristic of all these plugs is that they will withstand overheating of the engine for short periods without any detriment.

The patented construction incorporated in the A30 and A40 designs gives a wider range of resistance to heat and oil than is obtainable in any other make of plug.



On A.I.D. Air Ministry
Approved List.

Descriptive leaflet on request to:—

LODGE PLUGS LTD.—RUGBY.

*See the R.A.F. Display
—Hendon—13th July.*

International Aero
Exhibition,
16-27 July.

STAND 18.

Save time by using the Air Mail.

INTERNATIONAL AERO EXHIBITION OLYMPIA July 16-27, 1929

Come and inspect at close quarters all the latest aircraft.

A vast array of machines and engines—British, French, German, etc.—are on exhibition.

You can view at leisure, land 'planes, seaplanes and flying boats.

Engines ranging from 1,000 H.P. to 60 H.P.

Aeroplanes from the small private machine to the great triple-engined passenger-carrying craft—from the single-seat fighter to the giant bombing machine.

Many new aircraft secret machines, just released by the Air Ministry, will be displayed for the first time at this Exhibition.

The greatest and most up-to-date display of aircraft ever assembled under one roof.

Don't forget the R.A.F. Display at Hendon, Sat., July 13th, 3 days before the opening of Olympia.

AIRISMS FROM THE FOUR WINDS



Spanish Atlantic Airmen Found

H.M.S. "EAGLE," the aircraft carrier, found the missing Spanish Dornier-Wal flying-boat on June 29, after the machine had been missing for a week. It will be remembered that Major R. Franco and his companions, left Spain for the Azores on June 21 on the first stage of an attempt to fly to America. They were first reported to have landed safely, but later that was denied. Then an extensive search by aircraft and surface craft, in which H.M.S. *Eagle* was ordered to take part, was waged for a week. The Admiralty received the following message from H.M.S. *Eagle*, which contains Major Franco's story of the flight. "We left Los Alcazares (Cartagena) at 17.00 hours, June 21, passing Cape St. Vincent at 21.00 hours. From the Cape we were forced to gain height owing to excessive air disturbances. From Cape St. Vincent to the Azores was an interrupted layer of cloud, above which we had to fly. Later another cloud layer formed above us. The intended time of our arrival at the Azores was 09.00 G.M.T. on June 22, but a strong north-east wind which we were unable to foresee or check in flight, caused us to pass over the Azores during the dark. At dawn we took our longitude by the sun, which showed that we were to the south-west of the Azores.

"We therefore flew through the clouds and alighted to economise fuel and examine the situation more closely. We checked our position and took off, shaping a course to Fayal, but, owing to strong headwinds, ran out of petrol about 40 miles from that point. Strong north-easterly winds drifted us to the south, and on the following day, June 23, we were about 100 miles from Fayal. The wind

shifted to the south-west, reaching gale force, and drifted us to the island of Santa Maria. From June 24 to 27 winds of varying force and direction drifted us about. On the morning of the 27th the situation was extremely dangerous on account of the wind and sea conditions. At dawn on June 29 the aircraft-carrier *Eagle* found us in the vicinity of Santa Maria and took us on board. The behaviour of the aircraft and engines (Hispano-Suizas) was magnificent."

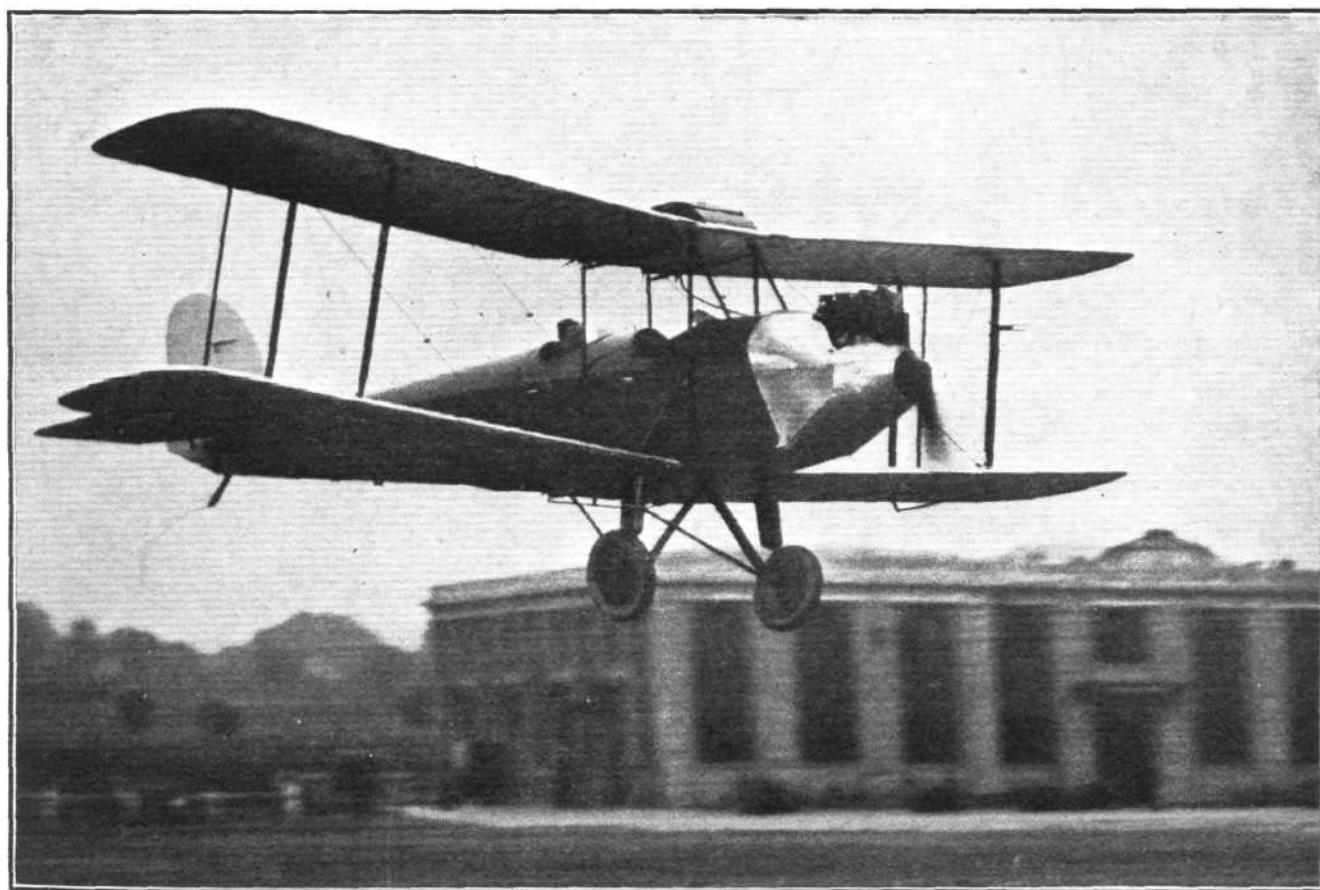
The aircraft-carrier reached Gibraltar on July 2 and the crew and the Spanish airmen received a great welcome. The Governor of Algeciras conveyed the Spanish Government's thanks to Capt. Lawrence of H.M.S. *Eagle*, whilst Spanish aircraft flew over the British warship. Flt.-Lieut. Lewin, who flew the machine from which the airmen were sighted has been singled out for special praise, and it is understood that the Spanish Government intends to award decorations to Capt. Lawrence and Lieut. R. A. Kilroy, who sighted the machine when on duty in the aircraft-carrier.

Englishman's Success in World Competition

News is to hand that Mr. J. L. Gleaves, of Manchester, is the only Englishman to secure a reward in the world competition for an Atlantic air port at San Domingo.

Australian Minister's Tour

MR. C. L. ABBOTT, Commonwealth Minister for Home Affairs, completed his aerial tour of grassland areas, in connection with further settlement, on June 26. He covered 6,000 miles, and crossed one territory of 350,000 square-miles, in which, he states, there were only 400 white people. Altogether Mr. Abbott was very impressed with aerial transport.



FIRST DELIVERY. A Simmonds "Spartan" (85 h.p. "Cirrus III") light 'plane, the first to be delivered to National Flying Services, Ltd. It is painted in the N.F.S. colours of orange and black. (FLIGHT Photo.)

Southern Cross Flight

ON June 25 the *Southern Cross* monoplane commenced its second attempt to fly to England from Australia. It left Sydney, with Sqdr.-Ldr. Kingsford Smith and the same crew on board, that day, and flew non-stop to Derby in North-West Australia in 22 hrs., the distance being 2,000 miles. On June 27 it flew non-stop to Singapore after flying for 19½ hrs. The weather was fair for that stage, which included the 600-mile crossing of the Timor Sea, and the western end of Java was sighted at dawn. On June 30 the third long non-stop stage was completed. The machine reached Rangoon. It was delayed there for the correction of a slight defect. Calcutta was reached on July 2. This machine is a Fokker monoplane with three Wright "Whirlwind" engines.

Non-Stop Across America

CAPT. F. HAWKS completed a double crossing of the American continent between New York and Los Angeles last week in two days, which is a record. He first flew from east to west last Thursday in 19 hrs. 10 mins., and returned in 17 hrs. 38 mins. on the next day.

The Antarctic Expedition

A REPORT by the Secretary of the Navy in America states that Commander R. Byrd's expedition in the Antarctic has discovered 20,000 square miles of new land. A landing was made for scientific observations.

Anniversary

JULY 2 was the tenth anniversary of the start of the British airship R.34 on its Atlantic flight in 1919, the first of its kind in history. The outward voyage took 108 hours, and the return voyage 75 hours, and 6,400 miles were flown. Maj. G. H. Scott was in command.

Graf Zeppelin Plans

THE round-the-world flight of the *Graf Zeppelin* is announced to commence on July 20 from Friedrichshaven. It is planned to steer a course across the Atlantic, then return and fly to Tokio, then fly the Pacific to Los Angeles, cross America, and return over the Atlantic once again.

The Caproni 100 T. on Tour

PILOTED by the Italian Ace, De Bernardi, the Caproni 100T. light biplane (the Italian version of the D.H. "Moth") has just been put through a series of successful flying demonstrations in Hungary, Jugoslavia, Roumania, and Bulgaria. The machine, says our Italian correspondent, created a favourable impression throughout the tour, and De Bernardi met with enthusiastic receptions.

Italian Submarine with Aircraft

AT Taranto, the Italian Navy recently launched a submarine specially designed to carry aircraft, which is the first of its kind produced in Italy. The machine is a seaplane with folding wings, very small and fast, and housed in a steel watertight hangar.

Air Force Reductions in Australia

OWING to unsatisfactory financial conditions, the Federal Ministry in Australia is expected to make drastic retrenchments in the Air Force, states *The Times*, including the dismissal of many ratings and the closing of the experimental station at Richmond, N.S.W. This policy is naturally deplored by many officers as being directly opposed to Air Marshal Sir John Salmon's recommendations last year.

The First Channel Crossing

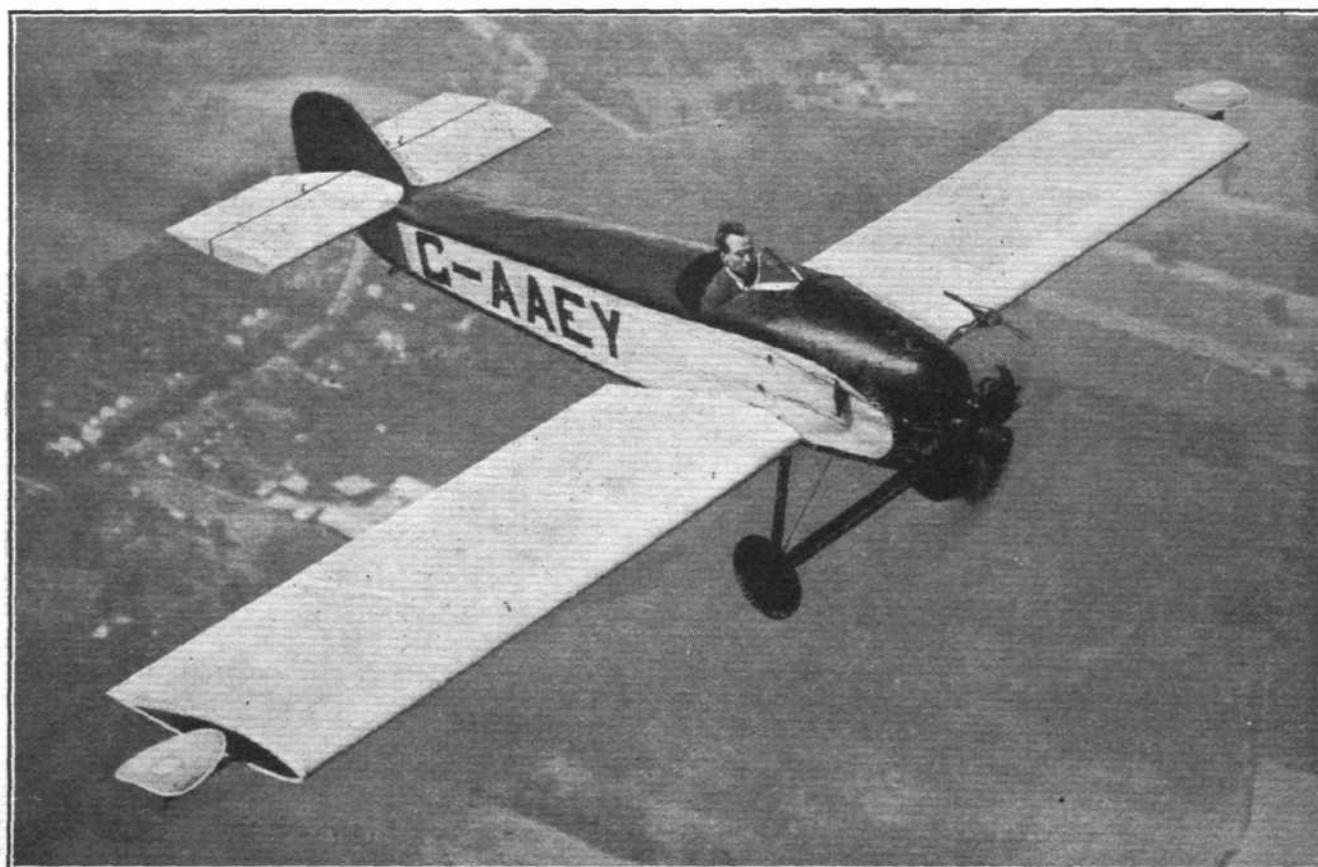
WE would remind our readers that the 20th anniversary of M. Blériot's flight across the English Channel is to be commemorated. The actual anniversary is on July 25, but as it is impossible for M. Blériot to leave Paris on that day, the celebrations will take place on Saturday, July 27. The airmen will again fly the Channel from Calais to Dover, but this time as a passenger. The machine will land as near as possible to the spot at which he made his historic landing in 1909, and Alderman H. E. Russell, Mayor of Dover, will accord him a civic welcome.

Later, M. Blériot will fly to Croydon to be received by prominent people in aeronautics. That evening, he will be entertained at a banquet at Olympia—where the Aero Exhibition will be concluding—by the Royal Aeronautical Society, Royal Aero Club, the Air League and the Society of British Aeronautical Constructors.

On Sunday, July 28, M. Blériot will fly back to Calais in a machine placed at his disposal by Imperial Airways to take part in the fête being arranged there in celebration of the crossing of 1909.

Brighton Air Port

MANY months ago there were suggestions that Brighton would have its own aerodrome, but since then the subject has not been publicly raised. Now it seems that the Southern Aircraft Company has chosen a site which was used by the Royal Air Force during the war. It is reported to be very flat, only 20 mins. from Brighton, and 100 yards from a railway halt, and on the banks of the River Adur at Shoreham. The purchase price is put at £6,000. It is to be made suitable for the operations of large aircraft, and the municipality is interested in it.



"GADDING ABOUT" : An aerial photograph of the Glenny & Henderson "Gadfly," piloted by Mr. Glenny. Note the Pearson type "rotary ailerons." This machine will be shown at Olympia. (FLIGHT Photo.)

Blackburn
LINCOCK

200 H.P. LINCOCK SINGLE-SEATER FIGHTER

"One is glad to have another opportunity of emphasising the Lincock's performance, for it is miles an hour faster than any single-seater which is at present issued to squadrons of the R.A.F. . . . It did everything that has ever been done at an R.A.F. Pageant by a single-seater. Its vertical upward rolls were quite remarkable and its slow horizontal rolls showed that it is good to handle." *The Aeroplane April 3 1929.*



THE BLACKBURN AEROPLANE AND MOTOR COMPANY LTD.

*Head Offices and Works: BROUGH, EAST YORKSHIRE.
London Office: AMBERLEY HOUSE, NORFOLK STREET, STRAND, W.C.2.*

Save time by using the Air Mail.

THE NEW "BP" REFINING PROCESS GIVES YOU A BETTER PETROL AT THE SAME PRICE



*Gives
you more*

*Costs
no more*

HANDLEY PAGE AUTOMATIC SLOT CONTROL

"With automatic slots it is possible to rock the aircraft slowly laterally through small angles at the stall by the use of the ailerons only."

*Air Ministry Report
No. M/Res/36.*

HANDLEY PAGE, LTD.
CRICKLEWOOD,
LONDON, N.W.2.

Kindly mention "Flight" when corresponding with advertisers.

ACROSS AMERICA ON A "CIRRUS-AVIAN"

Lady Heath's Sales-Tour

IN the interests of the American "Cirrus" engine, Lady Heath has completed a light 'plane sales tour across America. We are informed that 6,000 miles were flown during the month of May on a zig-zag course, forty manufacturers and schools were visited, and 125 demonstrations given. Her machine was a "Cirrus-Avian," and the tour was not without incident. At Emporia, a town in the centre of the continent, verging on the West, Lady Heath arrived as the Sheriff was hastening off a pilot to catch a thief who had stolen an aeroplane the night before, and was endeavouring to cross the Mexican Border.

In the south-west of the Continent were extensive floods, and even airports were only spared small dry spots. Wichita, Kansas, which calls itself "The Air Capital of the World," although its population only totals 20,000 inhabitants, has fourteen airports and twenty-seven manufacturing companies. Lady Heath had the opportunity of flying a popular type of training machine, "The Swallow," fitted with a new radial engine, the Axelson motor. It impressed her with its performance. It is manufactured at Los Angeles. During an hour's flight from Temple to Fort Worth, Texas, the "Avian" touched 140 m.p.h. Lady Heath arrived there at the period when the two American airmen, Robbins and Kelly, made their endurance record (with the aid of refuelling) in the Ryan monoplane ("Whirlwind"). At that time of the year the heat south of Texas was as bad as in Africa, but although various kinds of oil were experimented with, the "Cirrus" ran well.

Extra petrol tanks had to be fitted when in that area, for the course led over deserts and mountain ranges. Flying had to start at dawn and finish no later than the middle of the morning owing to the extreme heat. In the heart of the desert is the picturesque little town of Tucson, at which aircraft always call, surrounded by Indian encampments. The "Avian" landed there.

From Wichita, westwards, lie the great oil wells, including the largest in the world. There are over a thousand wells, and all the great oil companies, such as Standard Oil, have their own villages and camps. Everyone lives in his car and houses are only built for the day. Another port of call



Miss Marvel Crosson, who, with her brother, operates an air service in Alaska, using Fairchild cabin machines. A thousand miles is flown in a day, and Miss Crosson takes alternative turns with her brother on the service.

for the tourist was Lindbergh Field, San Diego, on the Pacific Coast.

Airwoman Runs Arctic Air Service

Lady Heath met an interesting airwoman in Miss Marvel Crosson, whose brother had flown with Sir Hubert Wilkins. Brother and sister are running an air service in Alaska with two four-seater Fairchild machines fitted with skis. Miss Crosson flies one and her brother the other. The distance covered is 1,000 miles, and it is flown in one day. As the prevailing wind is from the north-west and blows strong at altitude, it takes four hours in one direction and eight hours in the other. It is possible to accomplish the distance in one day, because there is perpetual daylight in the Arctic Circle for six months of the year.

Miss Crosson is said to be the only airwoman to fly into the Arctic Circle. She informed Lady Heath that her standard equipment on the Fairchild always includes petrol for the return flight, as there are no petrol dumps, and skis for travelling over soft snow, and moccasins for hard snow, and rations for a week in case of forced landings. If a machine fails to arrive, no worry is felt before a fortnight, as it takes that time for a message to get through from any outlying settlement where a landing may be made.

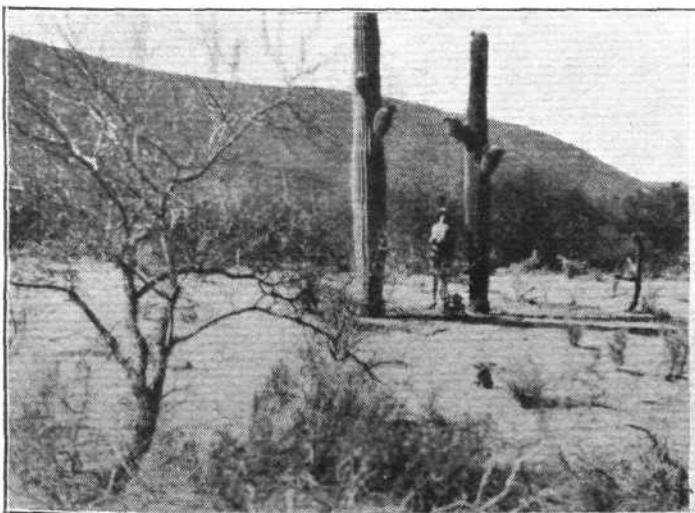
There is one stretch over which this air line operates which takes twenty-two days to cross by dog track.

Lady Heath was hospitably received throughout her American tour, and estimates large business for American Cirrus Inc. Ltd.

Developments

Many British light aeroplanes and aero engines are being manufactured by American companies under licence. The Avro "Avian" is produced out there by the Whittelsey Mfg. Co., of Bridgeport, Conn., who recently secured the services of Capt. R. J. Goodman Crouch, who was formerly with the Air Ministry.

Blackburn types of aircraft, military and commercial, including the "Bluebird" light aeroplane, are to be produced in Detroit. It is stated that a combination is forming which will have sole rights concerning Blackburn aircraft for both North and South America, with, *pro tem.*, the exception of Brazil.



Desert round Tucson, in Arizona, over which Lady Heath flew, showing the tall cacti which covers the desert. In the other picture the Sheriff of a western town is sending off a pilot to catch a thief who had stolen an aeroplane and was flying for the Mexican Border.

CAMBRIDGE UNIVERSITY AIR SQUADRON

By MAJ. F. A. de V. ROBERTSON, V.D.

"PLEASE, can't you go lower; there's my house down there, and I should like to have a near look at it," pleaded a certain Cambridge don down the speaking tube to the pilot. "You are not above 1,000 feet, and that's lower than you ought to be," sternly replied the pilot. "You know that low flying over Cambridge is strictly forbidden." The don in question was a senior member of the University, and one of considerable influence. Hitherto he had been a root and branch opponent of flying for undergraduates, and had looked with grave disapproval on the activities of the Air Squadron. He had not been backward in complaining of the noise made by aeroplanes overhead, and held, quite rightly, that low flying over the city should be visited with all the penalties to be found in any code of laws which could be brought to bear. But one day Wing-Commander V. S. Brown, M.A. (Cantab.), the Chief Instructor of the Squadron, inveigled the said don out to Duxford, just to see the conditions under which the members flew, and then enticed him rather reluctantly into an Avro with an instructor as pilot, just to see what flying was like. He was taken over Cambridge, and a point was stretched by coming down to 1,000 ft. The instructor had been listening to hear if the don would say that he was feeling sick and wanted to be taken back and landed. The last thing which he expected from a stern disciplinarian was a request to break all rules by going really low so that the don might have a look at his house from the air. Ever since that day the said don has been a whole-hearted convert to flying and a firm friend of the squadron.

Another don, the Rev. Dr. Simpson, Fellow of Trinity, owns his own Moth, and gets a pilot to take him up. But he says that when he can manage his own machine he means to dispense with that pilot.

Those two cases illustrate the spirit which exists at Cambridge towards flying in general, and the University air squadron in particular. Cambridge has become air minded, and as the Air Ministry laid down the first object of the squadron as "to promote a serious interest in flying and its allied subjects," it appears that Wing-Commander Brown has achieved a notable success. Last term the Senate had to vote on the question of whether undergraduates who were not members of the air squadron should be allowed to fly in term time. The question was becoming acute, because the numbers of the squadron are limited to 75

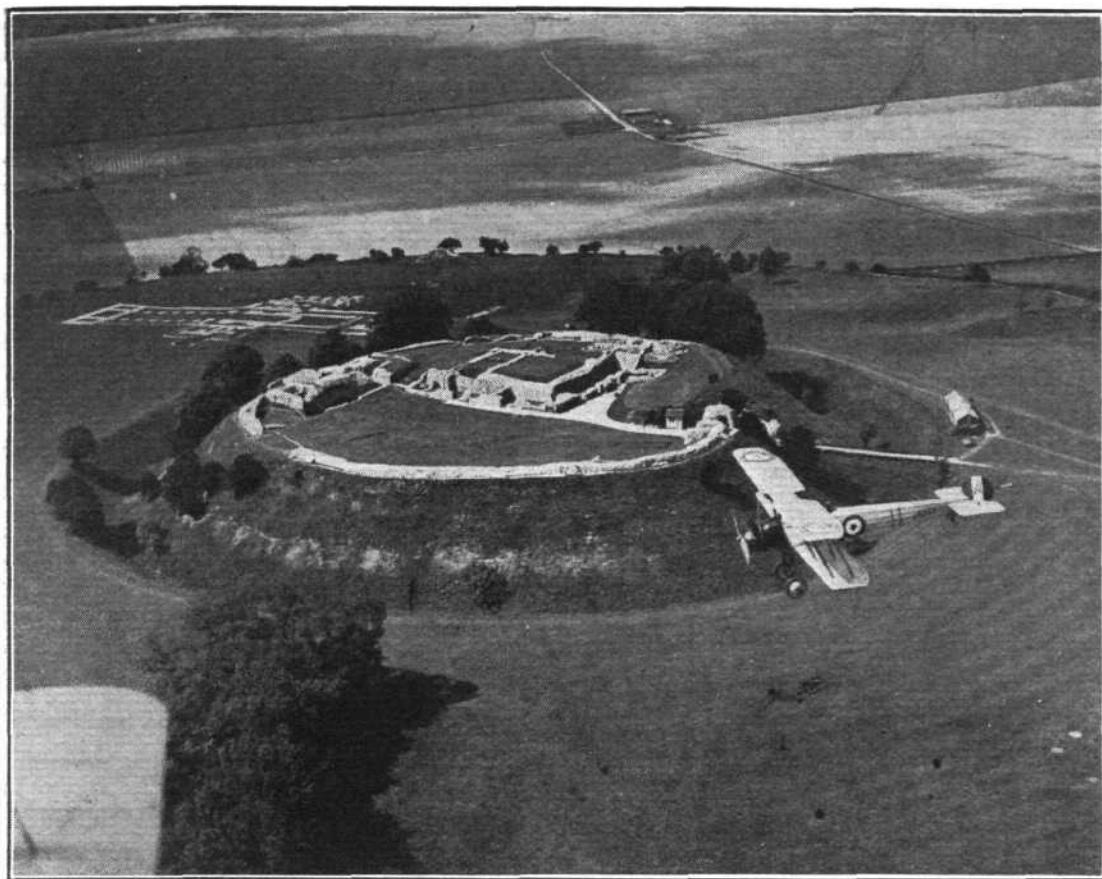
members, and competition to get in is very keen. Only the very best are taken, and so many very good men have no chance of ever becoming members. To cater for their needs, a branch of the Suffolk and Eastern Counties Aeroplane Club has been formed in Cambridge, and 18 members of the University have joined it. The question was, should they be allowed to fly in term time. About 200 senior members of the Senate debated the question warmly, and finally permission was granted by a convincing majority, which included the proctors, of 141 to 65. The further question of men flying their own aeroplanes will probably be gone into in the near future.

Talking of private owners, it was recorded in FLIGHT of June 13 that at the air display at Conington the landing competition was won by Mr. R. W. H. Knight in his own D.H. 53, with the well-known pilot Flying Officer E. H. Alliott second. Mr. Knight is a member of the Cambridge University Air Squadron. When once he crashed his little machine he did the repairs himself, putting in four new longerons, new plywood, and a new laminated tail skid. It is said that when an A.I.D. inspector came to pass the work he was positively amazed at its high quality.

The squadron is now undergoing its annual training at Old Sarum aerodrome. The members are divided into three courses of 25 each, and each course spends a fortnight at Old Sarum, living in bell tents (two to a tent), and messing at the station mess. The permanent staff consists of the Wing-Commander, who is really C.O., Flight-Lieut. T. C. Trail, D.F.C., who performs the duties of adjutant, and four instructors, while three more instructors have been added for the period of training. In the first week the course achieved a total of 192 flying hours. Of the 25 in camp, 19 had qualified for flying solo when I visited the station on June 27, and by this time most probably two more have also qualified. At least one other member of the squadron, who is not on this course, is doing his training in the R.A.F. Reserve (in which most members of the C.U.A.S. are officers), and one day he flew over to see his friends in the camp. He will come there later on with one of the other courses when he has finished his training with the Reserve. Rowing men are represented rather strongly in the squadron, but hardly any of them are at Old Sarum now. They are mainly at Henley, and will come to the camp in one of the later courses. One of the soloists now at Old Sarum, Mr. Mayers, deserves special mention, because he had never



Members of the Cambridge University Air Squadron receiving instruction during their present annual camping at Old Sarum, Wiltshire.



Old Sarum : An aerial view of one of the Cambridge Air Squadron's Avro-Lynx machines flying low and parallel to the old Roman ruins of Old Sarum in Wiltshire, close to the aerodrome where the Squadron is now in training.

flown at all before June 16. During the training at Old Sarum the members average about 15 hours' flying if the weather is favourable, which is pretty good when one remembers that Wednesday is only half a day and Saturday an off day so far as flying is concerned. During term time last year the members averaged about four hours' flying, which was double the average of the previous year.

In one very important and significant respect this year has shown a great advance over previous years. Never before have more than three members in one year applied for regular commissions in the Royal Air Force. This year nine have applied. Only men who have taken their B.A. degree are eligible for University commissions, and they receive an antedate of 12 months; those with first-class honours receive a total antedate of 18 months. One of the nine, now Pilot Officer B. F. Cox, joined the service last February. Before going to a Flying Training School he had done 120 hours' flying, which is considerably more than can usually be managed at Cranwell. He left the F.T.S. with a Distinguished Pass, and has been posted, somewhat curiously, to No. 16 Army Co-operation Squadron at Old Sarum. Four other applicants for commissions have done over 100 hours' flying already, and during the training at Old Sarum and their Reserve training may well put in another 30 hours before they go to a F.T.S. Seven of the nine hold the squadron's certificate of proficiency, which means that they have passed an Air Ministry examination in airmanship, theory of flight, rigging, engines, and pilotage. The Royal Air Force could hardly hope for better material for its officers.



African Air Route

At a meeting of the Imperial Communications Committee of the British Empire League, presided over by Sir Henry Page Croft, M.P., at the British Empire Club, the following resolution was unanimously adopted :—“That, having regard to the recommendations of the Council of the British Empire League to His Majesty's Government in 1928, with reference to an ‘All-Red’ air route through Africa, the Imperial Communications Committee of the League expresses the hope that His Majesty's Government will allow nothing to delay the commencement of the Trans-African Air Route from Alexandria to Cape Town, as the joint scheme of the Cobham-Blackburn Air Lines and Imperial Airways, Ltd., has been ready to be put into operation for some months.”

About six of this year's squadron have obtained posts in aircraft firms, and one, Mr. Alston, who has been helping Prof. Melville Jones in research work, has been given an appointment at the Royal Aircraft Establishment at Farnborough.

Flying does not occupy all the time at Old Sarum, nor do lectures. Expeditions are made, and one day lately the whole course went to Gosport and was shown over H.M. Aircraft Carrier *Furious*. On off days the members motor about the country, often down to the sea for a bathe, and the staff make a point of taking those men who have not cars of their own for drives. A challenge cup is played for annually between the squadron and the station. Last year the station won it, and the contest is now in progress. The station has scored eight points by winning the cricket match, and the C.U.A.S. six points by a win at lawn tennis. The match at squash rackets will decide the fate of the cup for this year. The C.U.A.S., of course, is handicapped by never having its full strength present all at one time.

The machine establishment of the squadron is eight Lynx Avros and four Bristol Fighters, with one of each type in reserve. The quality of some of the flying is very good. One day the C.O. observed a machine do two very perfect slow rolls, and remarked that that must be his most skilful instructor. But that instructor proved to be sitting just behind him, and finally it turned out that it was a member of the squadron solo in the machine. The C.O. remarked that he did not tell him how very good the rolls were, for fear he should get swelled head. Let us hope that that member is one of the few who does not read FLIGHT.



Dissolution Honour

AMONGST the names in the list of Dissolution Honours, which was published in a Supplement to the *London Gazette* on June 28, is that of Sir Philip Albert Gustave David Sassoon, Bt., G.B.E., C.M.G., M.P., to be Privy Councillor. Sir Philip Sassoon was a Member of Parliament for Hythe Division since 1912. Under-Secretary of State for Air, November, 1924, to June, 1929.

R.A.F. Promotions

THE Air Ministry announced the half-yearly promotions in the Royal Air Force. Air Vice-Marshals Sir Edward Ellington and Sir William Geoffrey Salmond are promoted Air Marshals, while Air Commodores R. H. Clark-Hall and A. E. Borton become Air Vice-Marshals.

CROSS-CHANNEL DISASTER ENQUIRY

THE official enquiry into the disaster to the Handley Page air liner on June 17, when seven lives were lost, at which Sir Arthur Colefax is presiding at the Law Courts, has proceeded during the past week. Evidence which has been reported fully in the general press, was given at great length. Some vital points were brought out regarding the state of the machine and engines. Maj. J. D. C. Cooper, Inspector of Accidents, stated that he found No. 4 connecting rod assembly of the starboard engine completely broken as a result of a fracture of the big-end bearing studs. It appeared, he said, that the bearing studs on the port side of the bearing fractured in fatigue. That fracture was of an abnormal kind; the material had not failed under normal tensile stress. He found no suggestion that the nuts had not been properly tightened. All the internal parts of the engine were in excellent condition and adequately lubricated. He had not found any defect in the material which could account for the stud breaking. Mr. Swinburne, one of the assessors sitting with Sir Arthur Colefax, stated that it was a mystery why four studs, apparently perfectly good, and placed where they had very little work to do, should suffer fatigue and break in the way they did. He said it was a mystery, not only to Messrs. Napier, but to everyone else.

Capt. R. Brailli, the pilot of the Handley Page, said, in his evidence, that he had done 1,040 hours' flying, had made 101 flights across the Channel, 55 of them as captain, the others as assistant. Regarding the flight, he said that when he decided to turn back he throttled down the starboard engine, otherwise it would certainly have fallen out, for the vibration was terrible. In his opinion, the cabin became waterlogged owing to the open door between the cockpit and the cabin. The intrush of water would have taken place as the mechanic was passing through the door at the moment the machine touched the water.

Evidence was also given by Mr. N. R. Barnett, flight engineer on the Handley Page machine. He said that the pilot asked him to warn the passengers to put on their lifebelts. He showed the passengers how to inflate them, but also warned them not to inflate until free of the cabin. He also ripped the safety panel, which acted perfectly. On the question of the angle of the machine's descent, Mr. Barnett said that the cabin floor was at a normal angle, otherwise he would have had difficulty in assisting one of the lady passengers with her lifebelt.

Mr. Handley Page, during his evidence, said that in the ordinary way a pilot flying a land machine would not know how to make the machine alight on water safely. He would need to have specialised instruction, because a good landing which you might make on an aerodrome

would not necessarily be a good landing when alighting on water. It was easy to say, after the event, one would have done it differently. He was not a pilot, but personally he thought it was wrong to keep the engines on. The engine chart showed that the engines were running without alteration from before the accident until they actually touched the water.

Maj. Cooper was recalled to give further evidence, and he said that he formed the conclusion that the impact with the water was violent. He also thought that the conditions for bringing off the best possible landing, more particularly for a pilot inexperienced in landing seaplanes, were very difficult.

Air Vice-Marshal Sir Sefton Brancker, Director of Civil Aviation, stated in his evidence that his own policy was to give the pilots as free a hand as possible. They were highly trained and experienced men, and should be allowed to navigate as circumstances granted. Dungeness was a very nasty place to land, and he thought that a pilot might prefer the sea.

Maj. H. G. Brackley said that arrangements were being made for the provision of a fast lifeboat at Dover. At present they could only rely upon ordinary craft, but there was generally a tug in readiness at Dover.

Captain Balfour, giving evidence, said that in the case of twin-engined machines, of which the "City of Ottawa" was one, full flight could not be maintained with a normal load if one of the two engines went out of gear. The drop in such a case was 250 ft. a minute. He maintained that a twin-engined machine should never fly the Channel or at any moment be in such a position that, if one engine cut out, it could not make one of the two shores.

Gen. Groves also gave evidence. He said that a large proportion of air mail lines in Germany used three-engined machines; a well-known Dutch company used them, and they were used exclusively on a number of American routes. The latest development, which might have prevented the "City of Ottawa" disaster, was the fitting of "slots" for cases of forced landing. Replying to Mr. Doughty, General Groves said that Imperial Airways had four-engined machines on order, but no two-engined machines. He described the pilots of Imperial Airways as "the best in the world."

Mr. W. S. Worthington-Evans (for Messrs. Handley Page, Limited) mentioned that R.A.F. machines had slot wings, that all the new Imperial Airways machines were to be fitted with them, and that they were already in use on some of the machines. A slot device on the "City of Ottawa" would have reduced the landing speed and consequently lessened the impact with the water.



A NEW BRITISH TWO-SEATER "NOT-SO-LIGHT" PLANE: The Parnall "Elf," fitted with "Cirrus-Hermes" engine, will be exhibited at Olympia. Note the Warren Girder wing bracing. (FLIGHT Photo.)



YET ANOTHER SUCCESS ENGLAND-INDIA NON-STOP FLIGHT

The Fairey long range Monoplane (Napier Lion Engine) which achieved the record non-stop flight from Cranwell to Karachi—a distance of 4,130 miles—in 50 hours 38 minutes, was fitted with Claudel Hobson Carburetters.

**CLAUDEL
HOBSON**

CARBURETTERS

H. M. HOBSON LTD., 47-55, THE VALE, ACTON, LONDON, W.3.

Telephone: Chiswick 4231 (4 lines).

Telegrams: "Assemblage, London."

A. J. W.

REYNOLDS

AIRCRAFT TUBING
as used by the leading British
Aircraft Constructors, is
shown at the Aero Show.
Manufactured to all speci-
fications, our Tubes can be
supplied in any of the
following forms :—
Round and Special Sections,
Taper Gauge, for Axles, etc.
Manipulated Tubes of all
descriptions including Built-
up Components (Welded).
Any thing in Steel Tubing for Aircraft
SEE THEM ON STAND
No. 163, OLYMPIA.

REYNOLDS

**AIRCRAFT
TUBING**

REYNOLDS TUBE COMPANY, LTD.
HAY HALL WORKS, TYSELEY, BIRMINGHAM

Save time by using the Air Mail.

K.B.B.

Compasses

for

AIRCRAFT

Latest K.B.B.
Models,

embodying all up-to-date improvements, will be demonstrated on the K.B.B. STAND 154, SECTION C.GALLERY, at the INTERNATIONAL AERO EXHIBITION, OLYMPIA, July 16th—27th.

As Pioneers in Aircraft Compasses K.B.B. were first in the field in the days of Cody, Latham, Boyle, and other early adventurers, and still have retained the Premier position to date.

Manufacturers of the LATEST BRITISH GOVERNMENT MODELS.

KELVIN BOTTOMLEY & BAIRD, LTD.
18, Cambridge St., Glasgow, & Imperial House, 86, Regent St., London, W.1.

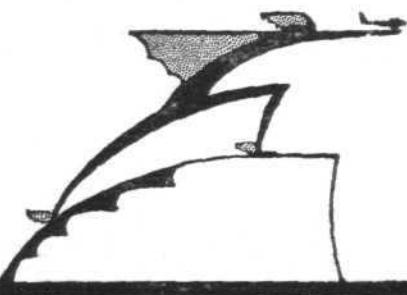
The Late Lord Kelvin,
Chairman, 1900-1907

*Illustrated Descriptive
Leaflet free on
Application.*



AIRWORK LIMITED

TELEPHONE HAYES 360



HESTON AIR PARK

Kindly mention "Flight" when corresponding with advertisers.

EDDIES

AN excellent lead was given last week by the French police authorities in refusing permission to Arthur Schreiber, the "Yellow Bird" stowaway from the United States, to remain in France, this "hero" having consequently to embark in the *Leviathan* forthwith. He, no doubt, had a comforting thought that he would be petted when he got back to his starting point.

IN that, it is heartening to know that he was disappointed, and it is to be hoped that the aeroplane stowaway "hero" has for all time received his *quietus* now that his exploit has been appraised at its true value and his reception inviting hostile demonstration only. Following his "ejection" from France, Schreiber's return to the United States was equally humiliating. Upon his arrival on the *Leviathan*, the *Telegraph* correspondent states that he then learnt France's real opinion of him as a stowaway on the aeroplane "Yellow Bird" was fully shared by his fellow-countrymen. Only his father was present to welcome him, and only one passenger served as his companion on the returning liner.

The stowaway was handed a bundle of newspaper clippings describing him as a disgrace to America and as one who deserved spanking. Chastened and nervous, the young man replied, "Perhaps they're right."

Schreiber said that he realised that he was no hero, and that all he wanted was to go home and be alone with his mother. No music-hall engagements awaited Schreiber's return.

If the episode ends there, he may well consider himself lucky.

HONOUR to Mary Reeve, of Fairford, Glos., who sends in an "unsolicited testimonial" to the navigators of the air a'nt the recent grievous Channel air accident, giving her "experience of the men who are entrusted with the charge of these aeroplanes." "With only another woman," the writer continues, "I travelled in one flying to Basel. An alarming storm came on, with torrents of rain and darkness, and the noise was appalling. We could not get through the Pass, the weight of the rain being too overpowering, and we had, in a very narrow part, to turn and fly back to Le Bourget. So that the public may feel reassured, I am writing to express our admiration of the pilot and his engineer. Their serenity and courage and personality so influenced us that we actually lost all fear, though it really was an appalling horror for about an hour. They inspired us with such confidence that I have never had the least tremor when flying again.

"I do not think the public half realise even yet the super-human bravery and alertness of these men, and they are not honoured half enough. Every one of them is a hero, and yet they think nothing of it; merely it is 'their job.' All praise to our flying men."

In fact, worthy of the Guild of their own now actually in being.

LOOKS as if the coming generation is being prepared for air-mindedness, when a 3½ years' old boy takes a 2,000 miles air trip to Egypt. Father, mother, a couple of other passengers, together with the "crew" formed the rest of the human cargo, some 20,000 letters for the Indian air-mail going as make-weight.

THE occasion, the other day, of reviewing the squadron of seaplanes (just returned from its Near East cruise) at Orbotello, whither he had flown with General Balbo, gave Signor Mussolini the opportunity of eulogising the Italian Air Arm. Not only, he said, were the Italian people proud of its aviators but last year's cruise in the Western Mediterranean and this year's cruise in the Eastern Mediterranean had demonstrated the steady progress of Italian aviation. They must, he continued, so perfect their machines and equipment that at any moment when the country and the régime might have to call upon them, squadrons of aeroplanes would leap up to dominate their own skies and carry hostilities into the skies of their enemies.

Which, of course, also demonstrates how much the League of Nations is getting a hold upon the world powers.

WHAT appears to be an excellent scheme for an aerial lifeboat for emergencies on the Channel air route has, it is stated by the *Daily Mail*, been placed before the British Government and countries using the route.

A considerable time must elapse before any vessel can

reach an aeroplane that is forced down on the sea far from a ship. The plan would provide for the maintenance at Lympne, near Hythe, Kent, of an amphibian rescue aeroplane, which could come down on the water or on land. It is possible to send an order to the coast from Croydon air station in half a minute.

An expert, in commenting upon the idea, has pointed out that the rescue pilot, within a minute or so of the distress call, could be off at a speed of 80 or 90 miles an hour, while a tug would be able to travel at only about 10 miles an hour.

The passengers would be transferred to the amphibian, which would ride the water safely until a vessel arrived.

A test has, it is stated, been carried out by Croydon officials, and the scheme was regarded favourably. It was shelved because no satisfactory arrangement could be made as to sharing the cost.

THIS seems to contrast very drastically with the so-called high-speed motor-boat stunt that was put forward some months ago as being launched for the purpose of picking up aerial mishaps in the Channel.

AVIATION is being catered for by leaps and bounds, now that folk generally are beginning to wake up to its stupendous possibilities. Even the special construction of a railway—if only a tube—is now put forward seriously for feeding the main air port of Paris for speeding up the air traffic between the French capital and London—an underground railway from the Paris opera quarter to La Bourget aerodrome is proposed, with non-stop trains from point to point, taking 15 mins. That time, it is suggested, could be occupied in the train with passport, Customs and ticket inspection! That's where a doubt begins to creep in upon the whole scheme. With experience of French methods in these directions, 15 mins. sounds just a wee bit optimistic for the job. Still, accepting this for the moment, and further extending the same underground railway facilities in London, the period of elapsed time between the two cities, it is calculated should cut out all competition—Channel tunnel, or otherwise.

THUS it is calculated that the time, under those conditions, would be barely 2½ hours! Prodigious! And when one comes to think of it, there's something in the idea, as at present, 45 minutes must be allowed, at least, for the motor-car journey from the West End to Croydon air port, or *vice versa*; the flying time is about 2½ to 3 hours, plus 45 minutes by motor-car at the Paris end. Yet, subject to phenomenal following winds, I'm thinking that 2½ hours all told will have to be revised—but even then the proposition, which, at the moment, may sound a little early, is quite a possibility in the not far away, if not a probability—*nous verrons*.

WE stand corrected! After all, Mr. Ramsay MacDonald is not the first Prime Minister to fly. And FLIGHT should have remembered this, but Time does fly so rapidly and progressive events aerial so crowd one upon the other, that it is not easy to *always* avoid a small lapse. As to the foregoing from our old friend Massac Buist, we received the following little rap:—

"It is nice to think that FLIGHT has been serving aviation so long that the time has now come when some of those who must work to produce FLIGHT are too young in experience to save it from committing that with which its name has not hitherto been associated unless my memory plays me false—I mean a slip."

"On page 516 of the issue of June 27, there is an illustration of Prime Minister Ramsay MacDonald, the caption of which commences with these words:

"Our first Prime Minister to fly."

"In point of fact he is not. As you are well aware, the first Prime Minister to fly was Bonar Law. He flew both during office and quite shortly before his death, as well as when he held other offices in the War Cabinet, and he flew during the war. Mr. MacDonald is therefore quite late in the field for there has been an interval of years during which we have had Prime Ministers who have not flown."

BY-THE-WAY! Don't forget the Royal Air Force Display at Hendon next week!!

AEOLUS

NEW YORK TO BE A SEAPLANE PORT

COMPLETE plans for a New York seaplane port, which American Aeronautical Corporation has under construction, have been announced by Lockwood Greene, Engineers, Inc. They are supervising its plan and construction on Manhasset Isle, Port Washington, L.I.

According to these plans the New York Seaplane port will be the largest and most complete seaplane terminal in the world. Construction costs will run over \$1,500,000. A series of inter-continental air lines, a flying school, and the manufacture of American Savoia-Marchetti seaplanes and amphibians are among the activities which will be carried on. Safe moorings, hangar space, and service facilities will be provided for flying-boats belonging to other manufacturers or to private owners, as well as for motor-boat cruisers.

New York will serve as a great seaplane flying centre. Its location on a broad, sheltered expanse of water like Manhasset Bay, and its proximity to New York City make it ideally suitable.

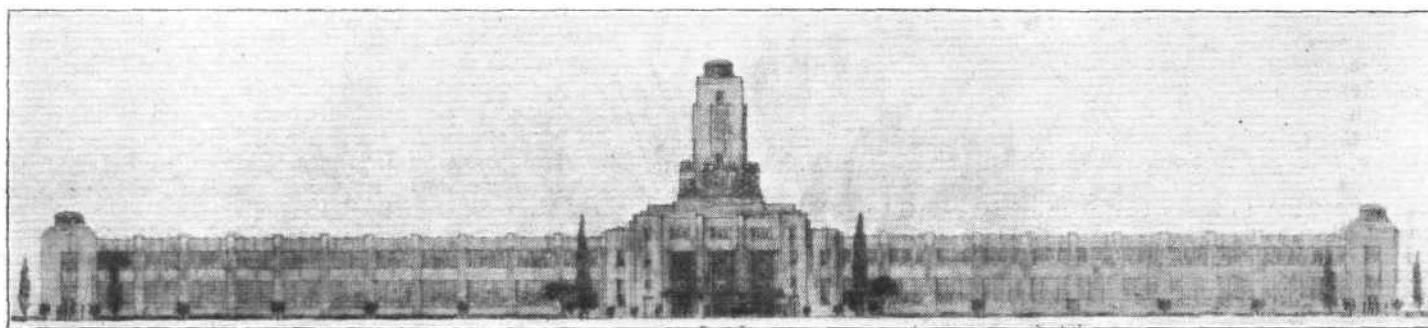
Those who are responsible for the erection believe that an airport should be something more than a place for 'planes to land and take-off. They believe it should be a comfortable

priately and comfortably arranged as an observation gallery or terrace for visitors, so that they may have an unobstructed view of the activities in the air and on the bay.

The south wing building will be 418 ft. long and 130 ft. wide. It will be used for assembling 'planes. The north wing, which will be 330 by 130 ft., will be used for general storage and airport service. Both wings will be one story high. Between them there will be an open court, and along the entire frontage of the wings and of the court there will be a wood and concrete third ramp extending west from a concrete retaining wall.

Parallel with the south wing there will be a dope-house, where the wings of the 'planes manufactured will be subjected to a special waterproofing treatment. A boiler-house will provide steam for heating the entire plant, and an automatic sprinkler system and complete sewage disposal equipment will also be provided.

All the buildings will be of brick and steel construction with gypsum roofs. The exteriors are to be face brick with the maximum possible amount of window space to give natural lighting conditions. All windows will be of steel sash glazed with wire glass. Lighting throughout, including



Proposed Main Buildings for New York's Seaplane Port on Manhasset Bay.

stopping-place, for air travellers as well as for spectators and pilots. They have had incorporated into the project many of the features which make European air terminals so popular with visitors from all countries.

The plans as outlined will provide a U-shaped main building with an impressive head building and two wings of the hangar type. The architecture of the buildings will be in modernistic style. Ramps will lead up from the water to a wide dock in front of the two wings which face Manhasset Bay. A minimum depth of 6 ft. of water at low tide in the bay and at the foot of the ramps will be available.

The head building, which forms the base of the U, will be 580 ft. long by 150 ft. wide, with a second story running the full length, but only 50 ft. in width. Manufacturing will be conducted on the ground floor of this building. A second story will be used for executive offices, drafting rooms, rooms for the theoretical and technical phases of flying instruction, and a restaurant and cafeteria.

The central portion of the head building will consist of a tower 100 ft. high. It will contain a water tank with a 50,000-gall. capacity for fire protection, as well as a control room for airport officials, a radio room, and a Neon light beacon. The main roof of the second floor will be approx-

the name of the airport on the roof of the buildings, will conform to Government regulations.

The entire area of the property is to be paved with concrete, excepting a 50-ft. strip in front of the manufacturing and office building along Sagamore Hill Drive; this strip will be landscaped with grass, trees, and shrubs.

Manufacturing equipment will be brought from the present manufacturing plant at Whitestone, L.I., and amplified to provide a complete installation at the new premises.

Directing the operations of the air terminal and the building of the 'planes will be five pioneers in the field of aviation. Enea Bossi is the president of American Aeronautical Corporation; Capt. Ugo V. D'Annunzio is a member of the board of directors and of the engineering committee, as well as president of American Aeronautical Sales Corporation; Paul G. Zimmermann is vice-president and general manager of American Aeronautical Corporation and will also act on the engineering committee; Comdr. J. Lansing Callan is in charge of operations of the 'planes and will act as general manager of U.S. Air Express, a subsidiary corporation; Alessandro Marchetti, who is the designer of Savoia-Marchetti 'planes, will serve actively on the engineering committee.



Auxiliary and Special Reserve Squadrons

FIVE squadrons of the Auxiliary Air Force and two squadrons of the Special Reserve begin their annual training now in July. The Auxiliary Squadrons are No. 600 (City of London), No. 601 (County of London), No. 602 (County of Glasgow), No. 603 (City of Edinburgh), and No. 605 (County of Warwick). The Special Reserve Squadrons are No. 502 (Ulster) and No. 503 (County of Lincoln). A new special Reserve unit, No. 504, has been formed at Hucknall Aerodrome, Nottingham, commanded by Sqdn.-Ldr. C. H. Elliott-Smith. Shortly, another will be established at Filton, Bristol. Provision has been made for new Auxiliary Air Force units at Thornaby, Yorkshire, and at Durham.

Aero Exhibition Functions

THE functions arranged in connection with the International Aero Exhibition are as follows: There will be a private view by the Prince of Wales at noon, July 16, the

opening day, followed by a lunch, at the end of which the Prince of Wales will declare the exhibition open. The public will then be admitted at 2 p.m. On July 18 there will be a banquet for our foreign visitors, invitations being issued by the Society of British Aircraft Constructors, Ltd. On July 19 a Civil Aviation Ball will be held. The tickets, price 30s. each, can be obtained from the Air League of the British Empire. On July 20 an Aerial Garden Party will take place at Heston Aerodrome. The Royal Aeronautical Society is holding a reception at the Science Museum, South Kensington, followed by the Wilbur Wright Memorial Lecture delivered by the Hon. Wm. P. McCracker, junr., Assistant Secretary of Commerce for Aeronautics, U.S.A. The exhibition will close with a banquet at the Savoy Hotel on July 27. The Royal Aeronautical Society is also arranging for a series of lectures during the exhibition by aeronautical scientists from Sweden, Holland, France, Germany, Italy, Canada and Great Britain.

No Visitor to London should miss the
ROYAL AIR FORCE DISPLAY

HENDON AERODROME—SATURDAY, JULY 13th.

GATES OPEN 10 a.m. FLYING FROM NOON.

The Display is designed to afford an opportunity to the public to witness the progress and efficiency of the Royal Air Force in a series of Service exercises that hold the sustained interest of spectators from first to last. Nearly 200 aeroplanes will take part.

PROGRAMME :

Great air battle and attack on a fortified port, involving its destruction by fire. Individual combats in the air. Crazy flying. Air races. Balloon hunting. Air drill. Parachute dropping. Aerobatics, and other spectacular events.

Booking now proceeding at Messrs. Keith Prowse and other Agencies.

ENCLOSURES, Tickets 10/- and 5/-. RESERVED SEATS in Grandstands, 3/- and 2/6 extra. Car tickets (including chauffeur), 7/6, 5/- and 2/-. 2/- tickets at Aerodrome on day of Display.

WORLD'S GREATEST AIR PAGEANT.

Accommodation for 100,000 spectators and 15,000 cars.

The WESTLAND WAPITI



with Bristol Jupiter VIII. Engine, as supplied to the Royal Air Force and Royal Australian Air Force.

"A general purposes" aircraft, suitable for reconnaissance, photography, wireless, advanced training, etc., fitted with Handley-Page Automatic Slot-gear. Supplied in both wood and all-metal construction. Undercarriage interchangeable for fitting seaplane floats.

Other Westland aircraft include the Westland "Widgeon," a highly efficient light 'plane for club and private use, and the Westland Three-Engined Limousine. Enquiries invited.

International Aero Exhibition, London, July 16 to 27, 1929. STAND No. 28.

See the R.A.F. Display, Hendon, 13th July.

WESTLAND AIRCRAFT WORKS,

Telephone: Yeovil 141.

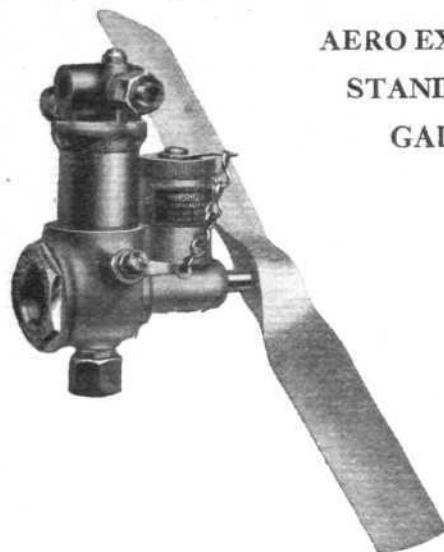
Works: *(Branch of Petters Ltd.)* **YEOVIL, ENGLAND.** *Telegrams: "Aircraft 141 Yeovil."*
CONTRACTORS TO THE AIR MINISTRY, AUSTRALIAN GOVERNMENT, ETC.

Save time by using the Air Mail.

Rotherham & Sons, Ltd.
COVENTRY.

Specialists in Aircraft Accessories.

AERO EXHIBITION,
STAND No. 144,
GALLERY.



The R & S Patent Mechanical Air Pump.

Enquiries invited for repetition machining work.

SEND FOR OUR 100-PAGE CATALOGUE.

'Grams: "Rotherhams, Coventry."

'Phone: 4154.

HIDUMINIUM
for
"Y" Alloy
Castings, Stampings,
Forgings.

Stampings and Castings to all light
alloy B.E.S.A. Specifications.

HIGH DUTY ALLOYS LTD.

Buckingham Avenue, Slough Trading Estate,

Largest suppliers of "Y" alloy in Europe.

THE AUTOGIRO

The utility aircraft.

An entirely new type of Light
Autogiro, comprising a device
for starting the rotor blades,
will be on exhibition at

Stand No. 20

at the

**International Aero Exhibition
OLYMPIA**

July 16th to 27th

THE CIERVA AUTOGIRO Co., Ltd.

**Bush House,
Aldwych, London, W.C.2.**

THE ROYAL AIR FORCE

HALF-YEARLY PROMOTIONS.

THE Air Ministry announces:—

The undermentioned promotions are made with effect from July 1, 1929:—

General Duties Branch

Air Vice-Marshals to be Air Marshals.—Sir Edward Leonard Ellington, K.C.B., C.M.G., C.B.E.; Sir William Geoffrey Hanson Salmond, K.C.B., K.C.M.G., D.S.O.

Air Commodores to be Air Vice-Marshals.—Robert Hamilton Clark-Hall, C.M.G., D.S.O.; Amyas Eden Borton, C.B., C.M.G., D.S.O., A.F.C.

Group Captains to be Air Commodores.—Peregrine Forbes Morant Fellowes, D.S.O., Air Aide-de-Camp to the King; Philip Bennet Joubert de la Ferte, C.M.G., D.S.O.; Reginald Percy Mills, M.C., A.F.C.; Wilfred Rhodes Freeman, D.S.O., M.C.; William Gore Sutherland Mitchell, C.B.E., D.S.O., M.C., A.F.C.

Wing Commanders to be Group Captains.—George Ivan Carmichael, D.S.O., A.F.C.; Malcolm Spicer; Ivor Guy Vaughan Fowler, A.F.C.; George Pascoe Grenfell, D.S.O.; Reginald John Bone, C.B.E., D.S.O.; Sidney Smith, D.S.O., A.F.C.; John Eustace Arthur Baldwin, D.S.O., O.B.E.; Francis Esmé Theodore Hewlett, D.S.O., O.B.E.; Charles Humphrey Kingsman Edmonds, D.S.O., O.B.E.; Richard Edmund Charles Peirse, D.S.O., A.F.C.; Hazelton Robson Nicholl, C.B.E.

Squadron Leaders to be Wing Commanders.—Charles Henry Nicholas, D.F.C., A.F.C.; James Conrad Peter Wood; Gilbert Stuart Martin Insall, V.C., M.C.; Geoffrey Ward Robarts, M.C.; David Grahame Donald, D.F.C., A.F.C.; Norman Channing Spratt, O.B.E.; Rene Maurice Bayley, D.F.C.; William Bowen Hargrave, O.B.E.; Ivor Thomas Lloyd; Raymond Collishaw, D.S.O., O.B.E., D.S.C., D.F.C.; Charles Oscar Frithiof Modin, D.S.C.; Sir Christopher Joseph Quintin Brand, K.B.E., D.S.O., M.C., D.F.C.; Norman Howard Bottomley, A.F.C.; Harry George Smart, O.B.E., D.F.C., A.F.C.; Francis Percival Don; Arthur Hicks Peck, D.S.O., M.C.; George Cyril Bailey, D.S.O.

Flight Lieutenants to be Squadron Leaders.—Arthur Penrose Martyn Sanders; Thomas Philip York Moore; Paul Douglas Robertson, A.M.; Ernest Frederick Turner.

Flying Officers to be Flight Lieutenants.—Frank Porter; Donald Robert Mitchell, M.B.E.; William Henry Jinman, M.B.E.

London Gazette, June 25, 1929

General Duties Branch

The follg. are granted permanent commns. as Pilot Officers on probation with effect from and with seniority of June 17:—335914 Sergt. L. R. S. Freestone; 335297 Sergt. E. Coleman; 362512 Sergt. H. E. Dicken.

Lieut. the Hon. J. M. Southwell, R.N., is re-attached to the R.A.F. as Flying Officer, with effect from June 16 and with seniority of June 16, 1924. Flight-Lieut. A. T. Laing continues on half-pay, scale B, during the period June 20, 1929, to Oct. 19, 1929, inclusive. Flight-Lieut. L. C. Wynne-Tyson is placed on retired list at his own request; June 18. Flying Officer W. G. Wainwright Fahey relinquishes his short service commn. on account of ill-health; June 26. Lieut. S. C. Woolley, R.M., Flying Officer, R.A.F., ceases to be attached to R.A.F. on return to Corps duty; June 15. Flying Officer E. T. St. Maur Brett is removed from R.A.F.; June 17.

Stores Branch

Flight-Lieut. A. Jukes, M.B.E., is placed on retired list; June 24.

ROYAL AIR FORCE INTELLIGENCE

Appointments.—The following appointments in the Royal Air Force are notified:—

General Duties Branch

Squadron Leaders.—S. R. Watkins, A.F.C., to Home Aircraft Depot, Henlow, 14.6.29. J. Neakes, A.F.C., M.M., to Central Flying School, Wittering, 1.6.29. A. S. Ellerton, O.B.E., to No. 58 Sqdn., Worthy Down, 24.6.29.

Flight Lieutenants.—R. Grice, D.F.C., to No. 26 Sqdn., Catterick, 18.6.29. W. E. James, to R.A.F. College, Cranwell, 15.6.29. N. W. F. Mason, to No. 503 Sqdn., Waddington, 13.6.29. G. V. Howard, D.F.C., to No. 6 Sqdn., Iraq, 1.6.29. B. A. S. Lewin, to H.M.S. "Eagle," Mediterranean, 1.6.29. F. J. Fressanges, to Aircraft Park, India, 27.5.29. J. Bussey, to No. 22 Group, H.Q., S. Farnborough, 19.6.29. G. T. Richardson, to R.A.F. Depot, Uxbridge, 1.7.29. R. D. Starley, M.C., to R.A.F. M.T. Depot, Shrewsbury, 20.6.29.

Flying Officers.—R. R. Bennett, to No. 4 Sqdn., S. Farnborough, 19.6.29. J. G. Franks, to Station H.Q., Hal Far, Mediterranean, 1.4.29. V. G. A. Hatcher, to Station H.Q., Hal Far, Mediterranean, 1.4.29. K. E. Parker, to No. 460 (F.T.) Flight, Mediterranean, 1.6.29. R. J. O. Bartlett, to No. 5 Sqdn., India, 25.5.29. B. C. Mason, to No. 600 Sqdn., Hendon, 17.6.29. J. A. T. Ryde, to No. 406 (Fleet Fighter) Flight, Donibristle, 18.6.29. G. D. Harvey, to H.Q., Wessex Bombing Area, Andover, 7.6.29.

Pilot Officers.—A. C. R. S. Upton, to Sch. of Naval Co-operation, Lee-on-Solent, 17.6.29. J. E. Allen, to No. 450 (Fleet Spotter Reconnaissance) Flight, H.M.S. "Argus," 16.6.29. E. R. White, to R.A.F. Depot, Uxbridge, 1.7.29. R. L. Bennet and J. H. Brown, to No. 2 Sqdn., Manston, 15.6.29.



Lieutenants, R.N., Flying Officers, R.A.F., to be Flight Lieutenants.—Richard Anthony Peyton; Anthony Paul Colthurst.

Captain, R.M., Flying Officer, R.A.F., to be Flight Lieutenant.—Alfred Basil Woodhall.

Stores Branch

Squadron Leader to be Wing Commander.—James Ambrose Stone.

Flight Lieutenant to be Squadron Leader.—Edward Meynell, D.C.M.

Flying Officers to be Flight Lieutenants.—Edward Crisp Farman; Horatio Sleigh; Frank Wilfred Taylor; Richard Thomas Rich; Josiah Edward Truss, M.C.; Albert Edward Frederick McCreary; George Clarence Wilson; Frederick Carton Griffin; Albert John Cox, M.B.E.; Edmund Noel Digby Worsley.

Accountant Branch

Squadron Leader to be Wing Commander.—Herbert Francis Fuller.

Flight Lieutenants to be Squadron Leaders.—John Swire Griffiths; Percy Jack Farmer.

Flying Officers to be Flight Lieutenants.—John Lovell Armstrong; Bruce Gerdyne Drake; Ernest Charles Green; Frank Maskell Hall; John Henry Sherer Richards; Rodney Thomas Carter; James Charles.

Medical Branch

Group Captain to be Air Commodore.—John McIntyre, M.C., M.B., M.A.

Wing Commander to be Group Captain.—James MacGregor, M.C., M.D.

Squadron Leader to be Wing Commander.—Percival Maurice Keane, D.P.H.

Flight Lieutenants to be Squadron Leaders.—John Kerr Ritchie Landells, M.B.; Edward Demetrius Dalziel Dickson, M.B., F.R.C.S. (E), D.L.O.

Flight Lieutenant to be Honorary Squadron Leader.—Ernest Emrys Isaac.

Princess Mary's Royal Air Force Nursing Service

Senior Sister to be Matron.—Miss Winifred Eveline Molesworth (Acting Matron).

Memorandum

The permission granted to 2nd Lieut. J. F. Rowbotham to retain his rank is withdrawn on his enlistment in the Royal Tank Corps; May 14.

RESERVE OF AIR FORCE OFFICERS

General Duties Branch

R. D. Bednell is granted a commn. in Class AA (ii) as Pilot Officer on probation; June 12. F. W. Winterbotham is granted a commn. in Class C as Flying Officer; June 25. Pilot Officer on probation R. Harston is confirmed in rank; June 25.

The follg. officers are transferred from Class A to Class C:—Sqn.-Ldr. C. H. R. Johnston (May 8); Flying Officer H. T. Messenger (June 24).

Flying Officer P. J. Waller is transferred from Class C to Class A; June 6. The follg. relinquish their commns. on completion of service:—Flight-Lieut. H. G. Travers, D.S.C. (June 22); Flying Officer J. Mitchell, D.S.O., D.F.C. (June 5); Flying Officer B. S. Wilcox, D.F.C. (June 19).

PRINCESS MARY'S R.A.F. NURSING SERVICE

Sister Mrs. G. M. Rutledge resigns her appointment; June 20.

J. M. Israel and J. D. Robertson, to No. 4 Sqdn., S. Farnborough, 15.6.29. G. W. J. Jarrett, to No. 13 Sqdn., Andover, 15.6.29. B. F. Cox and L. V. G. Barrow, to No. 16 Sqdn., Old Sarum, 15.6.29. A. K. H. Binney, to No. 58 Sqdn., Worthy Down, 15.6.29. F. C. E. Hayter, to No. 99 Sqdn., Upper Heyford, 15.6.29. I. M. Smith, to No. 101 Sqdn., Bircham Newton, 15.6.29. W. G. Stevenson and N. W. A. Cullum, to R.A.F. Base, Gosport, 15.6.29. J. C. L. Claxton, D. L. Ironmonger and G. R. O'C. Lempriere, to No. 9 Sqdn., Manston, 15.6.29. C. N. McLoughlin, to No. 12 Sqdn., Andover, 15.6.29. R. J. C. Hunt and R. C. W. Ellison, to No. 26 Sqdn., Catterick, 15.6.29. S. A. Davis, to No. 33 Sqdn., Netheravon, 15.6.29. K. G. Vandycck, to No. 35 Sqdn., Bircham Newton, 15.6.29. J. R. Ayling and H. E. Sales, to No. 100 Sqdn., Bicester, 15.6.29. F. K. Wood, to R.A.F. Base, Caishot, 15.6.29.

Stores Branch

Flying Officer M. F. Tomkins, to Marine Aircraft Experimental Estab. Felixstowe, 1.6.29.

Medical Branch

Flight Lieutenant C. J. S. O'Malley, to Station H.Q., Heliopolis, 1.6.29.

Flying Officers: A. R. French, to Station H.Q., Hal Far, 1.4.29. A. P. Atkins, to R.A.F. Training Base, Leuchars, 22.6.29. A. C. Lysaght, to Medical Training Depot, Halton, on appointment to a Short Service Commn., 11.6.29.

NAVAL APPOINTMENT

The following appointment was made by the Admiralty on July 1:—
Lieut. (Flying Officer, R.A.F.)—H. R. M. Nicholl, to Greenwich (July 1).

PERSONALS

Married

PATRICK DE COURCY FESTING-SMITH, R.A.F., only son of the late Alfred Charles Festing-Smith, L.R.C.P., L.R.C.S., of St. Budeaux, and the Honble. Mrs. R. J. Winterbotham, of Ambury, Cheltenham, was married on June 20, to EDITH ANN VERONICA, youngest daughter of the late DANIEL MAGUIRE, of County Monaghan, Ireland, and Mrs. Maguire, of Liverpool.

FLIGHT-LIEUT. CECIL G. PRIOR, son of Mr. and Mrs. Prior, of Bedford, was married on June 15 at Hayes Parish Church, Kent, to MARGARET, youngest daughter of the late Mr. and Mrs. H. S. MILLER, of Stoke Newington.

The marriage of MR. HENRY RICHARD DANVERS WAGHORN, R.A.F., elder son of the late Mr. John Danvers Waghorn and of Mrs. J. D. Waghorn, Aston Clinton, Buckinghamshire, and Miss MARY HELEN DYMOK WATSON, only daughter of the late Mr. Robert Watson and of Mrs. R. Watson, The Bourne Ridge, Farnham, Surrey, took place at the Church of St. Thomas-on-the-Bourne on June 15. Mr. R. L. R. Atcherley, R.A.F., brother officer of the bridegroom, was best man.

To be Married

The engagement is announced between FLIGHT-LIEUTENANT JAMES WOODS COLQUHOUN, R.A.F., eldest son of the Rev. R. W. and Mrs. Colquhoun, of Congresbury, Somerset, and Miss JOAN KINGSLY, daughter of the late Mr. A. Kingsley and Mrs. Kingsley, Shakespeare Road, Bedford.

The engagement is announced between PHILIP NORMAN ROMAINE HALL-WARD, The Border Regt. (attached R.A.F.), younger son of Mr. and Mrs. N. L. Hallward, of Westcote, Dunsfold, Godalming, Surrey, and BERYL SWEET, only daughter of Mr. and Mrs. W. McM. Sweet, The Woodlands, Limperystoke, Bath.

Death

Pilot Officer JAMES ERNEST JÖRGENSEN, No. 3 Fighter Squadron, R.A.F., who died on June 17, as the result of a flying accident, was the son of Mr. and Mrs. Leonard Jörgensen, of The Old Rectory, West Tytherley, Salisbury.

R.A.E.S. AND INST.AE.E.

Official Notice.

At a Council Meeting of the Royal Aeronautical Society, with which is incorporated the Institution of Aeronautical Engineers, Colonel the Master of Sempill, A.F.C., A.F.R.Ae.S., was elected President for the year October, 1929-1930.

The following were elected Vice-Presidents of the Society for the year October, 1929-1930:—Air Vice-Marshal Sir Vyell Vyvyan, K.C.B., D.S.O. Lt-Col. J. T. C. Moore-Brabazon, M.C., F.R.Ae.S., M.I.Ae.E. Mr. H. E. Wimperis, C.B.E., F.R.Ae.S.

J. LAWRENCE PRITCHARD, Secretary.

THE ROYAL AIR FORCE MEMORIAL FUND

The Executive Committee of the above fund held its third meeting of the current year at Iddesleigh House on June 26. Sir Charles McLeod, Bart., Chairman and Honorary Treasurer, was in the chair. The proceedings were almost entirely concerned with the financial position of the fund, which was found to be satisfactory in all respects.

The chairman informed the Committee that the trusteeship rendered vacant by the recent death of Lord Revelstoke had been accepted, to the great satisfaction of the Committee, by the Right Honble. the Lord Weir of Eastwood, P.C.

The Committee approved of the issue by the Grants Sub-Committee and the secretary of grants amounting in all to £1,904 16s. 8d., which had been issued from the fund between the dates May 1, 1929, and June 25, 1929.

It was announced to the Committee that two fresh grants had been made out of the "Salting Benefaction Fund" (which has been administered by the Committee since 1920), and also two grants were reported to the Committee as having been made out of the recently instituted Educational Fund, which is known as the "Anonymous Education Fund."

The Committee adjourned for the summer vacation and will hold their next meeting on October 9.

The usual meeting of the Grants Sub-Committee of the above fund was held at Iddesleigh House on June 20. Lieut.-Commander H. E. Perrin was in the chair, and the other members of the Committee present were:—Mrs. L. M. K. Pratt-Barlow, O.B.E., Mr. W. S. Field, Squadron-Leader A. H. Wann. The Committee considered in all 12 cases, and made grants to the amount of £309 11s. 4d.

The Royal Air Force Club

An Extraordinary General Meeting of the above-named Club will be held at the Royal Air Force Club, 128, Piccadilly, London, W.1., on July 12, at 5 o'clock (not 6 o'clock as previously notified) in the afternoon for the purpose of considering, and, if thought fit, passing the subjoined resolution in manner required for the passing of Extraordinary Resolutions:—"To authorise certain alterations to Rules XXIV, XXV(a) and XXVII."

Channel Islands Air Line

THE Tour and Travel Association announce the start of a daily air service from Southampton to the Channel Islands and back, using a Supermarine Amphibian (Napier "Lion") carrying six passengers, beside the pilot. The machine, which is fitted with Handley Page slots, leaves Woolston, Southampton, at 11.30 a.m. for Guernsey and Jersey, and returns to Southampton in the evening. When other machines are ready, it is intended to duplicate this service, and day trips may be run at reduced rates. Present fares are £3 10s. single and £6 10s. return. This service allows a traveller to leave London, visit the Islands, and return to town in time for dinner the same day.

An Important Change

THE British Aviation Insurance Group announce that they will in future, by special arrangement with the Air Ministry, undertake the inspection of light aircraft for renewal of certificates of airworthiness. Inspection work for this purpose will be undertaken in the first place under Air Ministry supervision, and will be confined in the early stages to a limited number of privately-owned light aircraft, normally housed within the London area. The charge for this inspection and recommendation will be £5 5s. as before.

the fee being passed by the Air Ministry direct to the British Aviation Insurance Group, who will, as soon as circumstances permit, return a proportion of such fee to the owner. This fee will include the renewal of the certificate of airworthiness free of charge. This service is designed to meet the requirement of private owners, and it is ultimately hoped to extend the service to other forms of civil aviation. A new department of the Group is being formed to undertake the work, and this will be housed in the offices of Lloyd's Register of Shipping, 71, Fenchurch Street, the traditional home of the survey and classification of British shipping.

Civil Aviation Ball.

REGARDING our paragraph last week concerning the Civil Aviation Ball, to be held on July 19, we very much regret that, owing to a typing error, the organiser of the Ball was given as "Mr." April Day. We need not point out to our readers that this should, of course, have been "Mrs." Sincerest apologies!

A Supermarine Resignation

WE learn that Mr. W. W. Swatman has resigned his position as Buyer for the Supermarine Aviation Works, Ltd., after being with the firm since 1917.



PUBLICATIONS RECEIVED

A.A. (Duplex) Throughway Maps: London and the Home Counties. John Bartholomew and Son, Ltd., The Geographical Institute, Edinburgh.

The Romance of Flight. By G. Gibbard Jackson. The "Boys' Own Paper" Office, 4, Bouverie Street, London, E.C.4. Price 5s. net.



NEW COMPANIES REGISTERED

MONO-SPAR CO., LTD., 4, Broad Street Place, E.C.3.—Capital £12,400, in 8,000 "A" shares of 1s. each and 12,000 "B" shares of £1 each. Objects, to engage in any scheme or business for the development, investigation, financing or encouragement of aircraft, aeronautic and airship construction, etc. First directors: H. J. Stiegler, 54, Bathgate Road, Wimbledon; R. A. de Haag Haig, 5, Clarendon Street, S.W.1; A. E. L. Chorlton, 55, Lower Belgrave Street, S.W.1; W. S. Stephenson, 143, Harley Street, W.; C. W. Hayward, Rosedale, Dunstall Road, Wolverhampton; A. H. Kaye, Dalkeith, Upper Park Road, Kingston Hill; M. L. Bramson, 26, Hanover Square, W.; G. O. Mitchell, Copse Wood Cottage, Ducks Hill, Northwood.

LIVERPOOL AIR LINES, LTD.—Capital £100, in £5 shares. Constructors, designers, manufacturers, and sellers on hire of and dealers in aeroplanes, engines, airships, and flying machines of all kinds. Solicitors: Wainwright, Pollock and Co., 9, Bush Lane, E.C.4.



AERONAUTICAL PATENT SPECIFICATIONS

(Abbreviations: Cyl. = cylinder; i.c. = internal combustion; m. = motor. The numbers in brackets are those under which the Specifications will be printed and abridged, etc.)

APPLIED FOR IN 1927

Published July 4, 1929

32,590. SOC. INDUSTRIELLE DES PROCÉDES W. A. LOTH. Signalling the position of moving bodies. (281,707.)
33,428. H. A. LLOYD and F. A. WRIGHT. Means for enabling light to penetrate foggy atmosphere. (313,180.)

APPLIED FOR IN 1928

Published July 4, 1929

6,760. P. N. G. PETERS. Wings, etc., and automatic stabilizing-devices for aircraft. (313,065.)
14,448. SOC. ANON DES ATELIERS D'AVIATION L. BREGUET. Aeroplane wings with internal pressure and elastic intrados. (292,907.)
21,963. M. GALLET and A. B. ANDERSON. Aeroplanes. (294,668.)
24,238. SULZER FRERES SOC. ANON. Ships with aeroplane decks. (301,058.)

FLIGHT.

The Aircraft Engineer and Airships

36, GREAT QUEEN STREET, KINGSWAY, W.C.2, Telephone: Holborn 3211. Telegraphic address: Truditur, Westcent, London.

"FLIGHT" SUBSCRIPTION RATES

UNITED KINGDOM

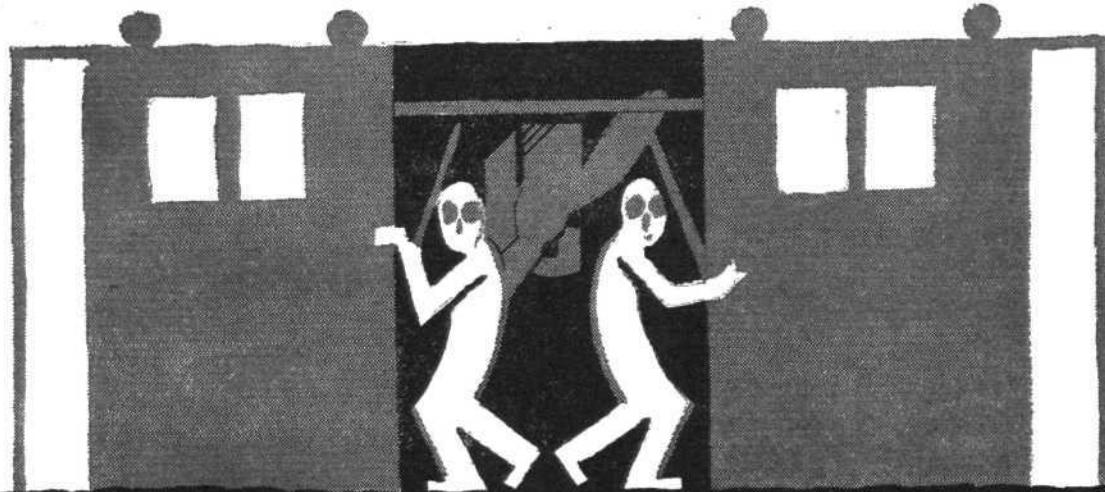
ABROAD*

	s. d.	s. d.	
3 Months, Post Free	7 7	3 Months, Post Free	8 3
6 " " .15 2	6 " " .16 6		
12 " " .30 4	12 " " .33 0		

* Foreign subscriptions must be remitted in British currency.

Should any difficulty be experienced in procuring "FLIGHT" from local newsagents, intending readers can obtain each issue direct from the Publishing Office, by forwarding remittance as above.

Cheques and Post Office Orders should be made payable to the Proprietors of "FLIGHT" 36, Great Queen Street, Kingsway, W.C.2, and crossed Westminster Bank.



IT'S COMING!

D. H. BONNELLA & SON, LTD.

*Manufacturers of High
Class Electrical Equipment
for all Types of
Aircraft Engines.*



WORKS & OFFICES:

46-48 OSNABURGH ST.,
LONDON, N.W.1.

Telephone: MUSEUM { 1882
 0504
 8393

Telegrams: "BONCINELLO, EUSROAD,
LONDON."

PLEASE WRITE FOR CATALOGUE.

Save time by using the Air Mail.

AVIATION BOOKS

" <i>Flying</i> ," By LT.-COL. W. LOCKWOOD MARSH, M.A.	1/1½ <small>Post Free</small>
" <i>Flying with Lindbergh</i> ," By DONALD E. KEYHOL	11/- <small>Post Free</small>
" <i>Civil Aviation</i> " ...	13/- <small>Post Free</small>
" <i>The Great Trans-Pacific Flight</i> ," The story of the "Southern Cross," By KINGSFORD-SMITH & ULM	13/- <small>Post Free</small>
" <i>Skyward</i> ," By COMMANDER RICHARD E. BYRD, U.S. Navy.	15/6 <small>Post Free</small>
" <i>Aeroplanes, Seaplanes and Aero Engines</i> ," By CAPT. P. H. SUMNER...	25/9 <small>Post Free</small>
" <i>Airmen or Noahs</i> ," By REAR-ADmirAL MURRAY F. SUETER, C.B.	25/9 <small>Post Free</small>
" <i>Ferrous Materials</i> ," By ARTHUR W. JUDGE, W.H.S.	25/9 <small>Post Free</small>
" <i>The Rigid Airship</i> ," By E. H. LEWITT, B.Sc.	30/6 <small>Post Free</small>
" <i>The Airplane Engine</i> ," By LIONEL S. MARKS	30/6 <small>Post Free</small>
" <i>Automobile and Aircraft Engines</i> ," By ARTHUR W. JUDGE, W.H.S.	30/9 <small>Post Free</small>
" <i>Airplane Design</i> ," Vol. I. By EDWARD P. WARNER	38/3 <small>Post Free</small>

All above are obtainable upon application to:

"FLIGHT" Office,
36, Great Queen Street, Kingsway, W.C.2.



COPPER, BRASS,
PHOSPHOR BRONZE,
TUBES, SHEETS, RODS and WIRE.
To AIR BOARD SPECIFICATIONS.

Specialities for Aircraft Work:—
**DRAWN PHOSPHOR BRONZE
TUBES AND RODS.**

By Authority of The Air Ministry, Inspection
Certificates are furnished with all our
manufactures ordered to Air Board Specifi-
cations.

**CHARLES CLIFFORD & SON, Ltd.,
BIRMINGHAM.**
ESTABLISHED 1776.

"FLIGHT" PHOTOGRAPHS (Copyright).

BLACK AND WHITE, GLOSSY,
UNMOUNTED:—

6½ x 4½ ... 1/6 8½ x 6½ ... 2/6 10 x 8 ... 3/6
12 x 10 ... 4/6 20 x 16 ... 10/6

DOUBLE THICKNESS, CREAM BASE, SEPIA
TONED, UNMOUNTED:—

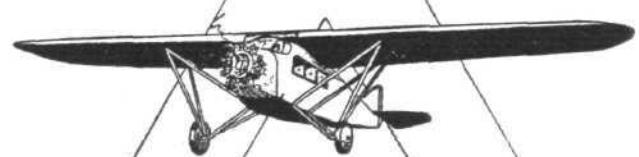
10 x 8 ... 6/- 12 x 10 ... 7/6 20 x 16 ... 21/-

HAND COLOURED, IN OILS
(GREY MOUNT):—

20 x 15 (MOUNT 24 x 19) ... 31/6

FLIGHT Office,
36, Great Queen St., W.C.2.
Holborn 3211.

THE SIGN OF SAFETY.



•R.O.P.
AVIATION SPIRIT.

RUSSIAN OIL PRODUCTS LTD.
MOORGATE HALL, LONDON, E.C.2.
PHONE: LONDON WALL 9204-5.

Kindly mention "Flight" when corresponding with advertisers.

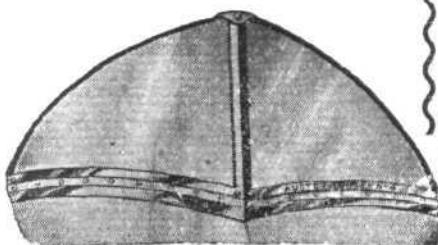
PRELIMINARY ANNOUNCEMENT.**THE AIRSHIP DEVELOPMENT COMPANY, LTD.,***beg to announce that**the preliminary flights will shortly take place at their***CRAMLINGTON AIRSHIP STATION, NORTHUMBERLAND***of the first of their***NON-RIGID AIRSHIPS "A.D.1."***Suitable for*

**PRIVATE FLYING
PASSENGER FLIGHTS
INSTRUCTION
ADVERTISING
AERIAL PHOTOGRAPHY
and SURVEYING.**

*Please address all enquiries to the London Offices :—***39, Victoria Street, S.W.1.***Telephones : Victoria 6521/22. Telegrams : LITERNAIR, SOWEST, LONDON.***AUSTER TRIPLEX AERO SHIELD.**

MODEL No. 4.

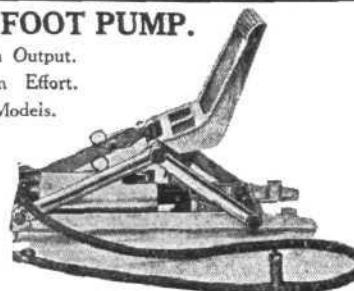
As fitted to D.H.50 Machines.

PROTECTED SIR ALAN COBHAM
on his
EPOCH MAKING FLIGHTS.**AUSTER FOOT PUMP.**

Maximum Output.

Minimum Effort.

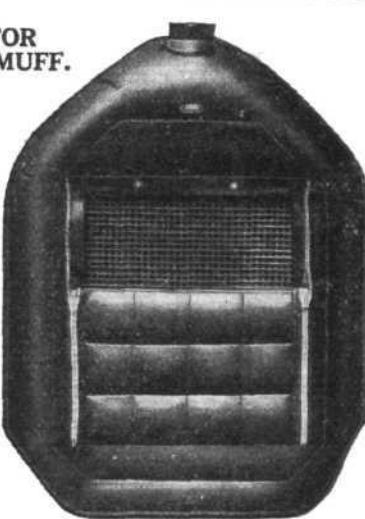
In 3 Models.

Large Cars,
No. 1, 42/-Light Cars,
No. 3, 35/-Garage, No. 2,
60/-.

Auster
Contractors to British & Foreign Governments
126-128, New King's Road, Fulham, S.W.6.
Putney 5301 (5 lines).
BIRMINGHAM : Crown Works, Barford St.
Phone : Midland 2123.
MANCHESTER : 306, Deansgate.

MOTOR RADIATOR MUFF.

The Muff partly opened protecting the bottom of the Radiator and ensuring an even temperature.

**The LARKIN AIRCRAFT SUPPLY Co., Ltd.,**

- (a) Employs the largest and most comprehensive staff.
- (b) Has the largest Paid-up Capital.
- (c) Possesses the only Aircraft Factory.
- (d) Is entrusted with the Largest Contracts.
- (e) Was established in 1919.



If you are seeking Australian Representation send Draft Agreements, Complete Specifications, and Price Lists to
MELBOURNE AERODROME, Dudley Street, MELBOURNE, AUSTRALIA.

Save time by using the Air Mail.

Second Impression.**LEARNING TO FLY***By***FRANK A. SWOFFER, M.B.E.**

Chief Instructor to the Hampshire Aeroplane Club; Late Instructor at the Central Flying School, R.A.F., Upavon. With Foreword by Air Vice-Marshal Sir Sefton Brancker, K.C.B., A.F.C.

Designed to give pilots in training a better grasp of the practical course of flying instruction. The book is full of practical advice to all concerned with flying.

Crown 8vo., 156 pp. 7s. 6d. net. Illustrated.

Described by *THE MORNING POST* as "probably the most complete exposition of the methods of teaching generally practised."

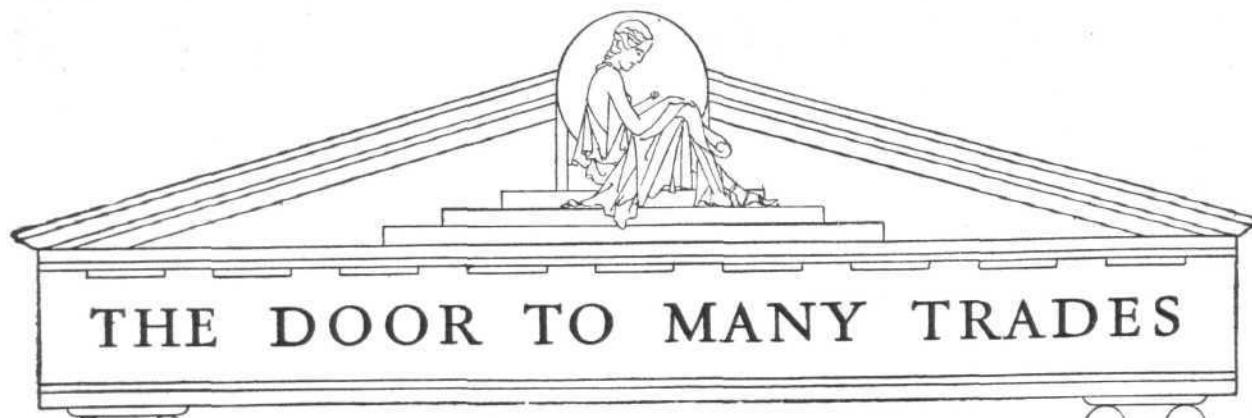
PILOT'S "A" LICENCE: By JOHN F. LEEMING. Explains how to obtain a Flying Certificate, with other official information.

Second Edition **3s. 6d.**

AEROBATICS: By Major OLIVER STEWART, M.C., A.F.C. A simple explanation of aerial evolutions. **5s. net.**

Order from a Bookseller or direct from

SIR ISAAC PITMAN & SONS, LTD.,
Parker Street, Kingsway, London, W.C.2.



THESE JOURNALS will assist you to market your products economically and effectively. They put you in direct contact with current trade developments and problems in the industries they represent, and offer expert and technical information to all their subscribers—a service which alone is worth many times the cost of the subscription. The address of any paper in this list will be furnished on request.

Amateur Photographer	Electric Vehicle.	Mechanical World.
Architects' Journal.	Electro-Farming	Men's Wear Organiser.
Architectural Review.	Empire Mail & Overseas Trade.	Miller.
Art Trade Journal.	Engineering & Boiler House Review.	Mining Journal, Railway & Commercial Gazette.
Autocar.	Experimental Wireless.	Model Engineer & Light Machinery Review.
Automobile Engineer.	Export Trader.	Motor.
Bakers' & Confectioners' National Association Review.	Fancy Goods Record.	Motor Body Building.
Beauty Shop.	Fertiliser, Feeding Stuffs & Farm Supplies Journal.	Motor Cycle.
Brewers' Journal.	Flight.	Motor Cycle & Cycle Trader.
Brewing Trade Review.	Footwear Organiser.	Motor Cycling.
British & South African Export Gazette.	Freemason & Masonic Illustrated.	Motor Trader & Review.
British Baker	Frut, Flower & Vegetable Trades' Journal.	Motor Transport.
British Engineers' Export Journal.	Furnishing Trades' Organiser.	Packing, Packaging & Conveying Gazette.
British Export Gazette.	Games & Toys.	Paper Container.
British Journal of Photography.	Gentleman's Tailor.	Photographic Dealer.
British Printer.	Grocer & Oil Trade Review.	Plumbing Trade Journal.
British Trade Journal.	Grocers' Gazette.	Power Laundry.
British Trade Review.	Hardwareman, Ironmongers' Chronicle & Builders' Merchant.	Sheet Metal Industries.
Broadcaster & Wireless Retailer.	Ice & Cold Storage.	Specification.
Caterer.	India-Rubber Journal.	Sports Trades Journal.
Commercial Motor.	Journal of Decorative Art.	Tailor & Cutter.
Confectionery Journal.	Kinematograph Weekly.	Talking Machine & Wireless Trade News.
Dairy & Creamery Journal.	Ladies' Tailor.	Textile Manufacturer.
Dairyman.	Leather Trades' Review.	Textile Weekly.
Drapers' Organiser.	Licensing World.	Tobacco Trade Review.
Electrical Industries & Investments.	Light Car & Cyclecar.	Waste Trade World.
Electrical Review.	Locomotive, Railway Carriage & Wagon Review.	Wireless Export Trader.
Electrical Times.	Meat Trades' Journal.	Wireless Trader.
Electricity.		Wireless World & Radio Review.
Electrics.		Women's Wear Fashions.

Official Handbook, giving particulars of over 500 papers, post free 1/-.

PERIODICAL, TRADE PRESS, & WEEKLY NEWSPAPER PROPRIETORS' ASSOCIATION, Ltd.
Telephone : Central 2441. 6, BOUVERIE STREET, E.C.4. Telegrams : Weneppa, Fleet, London.

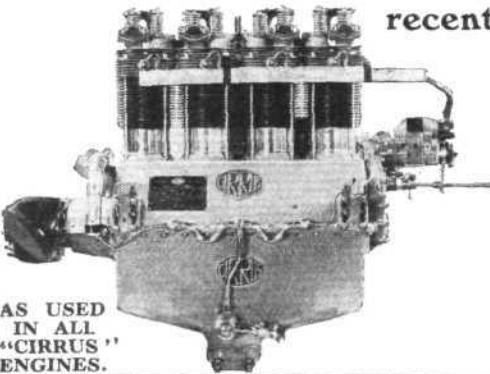
Kindly mention "Flight" when corresponding with advertisers.

KE-965

SPECIAL HEAT RESISTING
VALVE STEEL
for
INTERNAL COMBUSTION ENGINES

As used by Hinkler in his "Cirrus" Engine on his Australian Flight.

The most efficient Valve Steel introduced during recent years.



AS USED
IN ALL
"CIRRUS"
ENGINES.

KAYSER ELLISON & CO., LTD.
CARLISLE STEEL WORKS,
SHEFFIELD.

ESTABLISHED OVER 100 YEARS.

1. It forges and machines quite well.
2. The heat treatment is very simple.
3. It retains a high tensile value at high temperatures.
4. Withstands rigorous thermal changes without any detrimental effects.
5. It will not harden under any conditions, and is therefore never brittle.
6. It is very tough at all temperatures and under all conditions.
7. It resists erosion by exhaust gases to a remarkable degree.



TRIPLEX SAFETY GLASS CO., LTD., 1, ALBEMARLE ST., LONDON, W.I.

HANGARS—

PORTABLE or PERMANENT
GARAGES,
OFFICES,
STORES, etc.
PLANS & ESTIMATES
for
GENERAL EQUIPMENT.

Aerodrome Construction & Equipment Co.
3 & 4, Clement's Inn, London, W.C.2.
Telephone: Holborn 0386.

MISCELLANEOUS ADVERTISEMENTS.

Advertisements for this column should arrive at his office by Tuesday, 12 o'clock noon, to insure insertion. Special PREPAID Rate:—

18 WORDS or less, 3/-, then 2d. per word.

Display Caps Throughout, 1/6 per line.
Situations Wanted ONLY, 18 Words, 1/6.
1 1/2d. per word after.

All Advertisements to a Box No. 1/- per insertion extra.

AVIATION INSURANCE.

COME AND SEE US at the Aero Exhibition, Olympia, Stand No. 26—C. BRAY, GIBB & CO., LTD., 166, Piccadilly, London, W.I.

CONSULTANTS.

THE Design and Production of "Lighter-than-Air" craft is a speciality of THE AIRSHIP DEVELOPMENT CO., LTD., 39, Victoria Street, S.W.1, Aeronautical Engineers and Consultants. Telephone: Citoria 6521/2 (two lines).

ATTENTS.

P. THURSTON, D.Sc., M.I.Mech.E., M.I.A.E., F.R.Ae.S.

ATTENTS, Trade Marks and Designs.—Bank Chambers, 329, High Holborn, W.C.1. Holborn 12.

TANLEY, POPPLEWELL & FRANCIS, Chartered Patent Agents, Jessel Chambers, Chancery Lane, London, W.C.2. Telephone: Holborn 6393; Telegrams: "Notions, London."

SHNEIDER CUP.

FOR SALE OR HIRE, Cabin Cruiser, 28' 0" by 8' 0" beam, electric light, W.C., good week-end sel.—Apply, F. GILBERTSON, 12, Wharncliffe Rd, Southampton.

AIRCRAFT WANTED.

MODERN AIRCRAFT Purchased for Cash. Part exchanges for new machines.—BROOKLANDS SCHOOL OF FLYING, LTD. Telephone: Byfleet 437.

MARK I MOTH, any condition, for cash.—BROOKLANDS SCHOOL OF FLYING, Byfleet. Tel. 436-7.

AIRCRAFT purchased for cash, part exchange, or deferred terms.—PHILLIPS & POWIS AIRCRAFT (READING), LTD., Reading Aerodrome. Phone: Sonning 114.

MACHINES & ENGINES FOR SALE.

AERO ENGINES FOR SALE. Rolls Royce Eagle VIII, £100; Beardmore 160 h.p., £60; Sunbeam Arab, £55; Hispano 220 h.p., £65. All overhauled as new.—C. B. G., 19, Hillcrest Road, Acton, W.3. Telephone: Chiswick 4996.

SIX Bristol Jupiter advanced training machines, without engines, all in first-class condition, also spares for same, can be obtained at very moderate prices.—Inquiries and offers to be addressed FLYING SCHOOL, Moorpark Aerodrome, Renfrew.

AIRCRAFT FOR SALE.—Three-seater Avro Joy-rider. Twelve months' C. of A. £195. Delivery three weeks.—BROOKLANDS SCHOOL OF FLYING, Brooklands Aerodrome, Byfleet.

MISCELLANEOUS.

AIRCRAFT REPAIRS. No job too small or too large. Complete reconditioning for C. of A. Full certificated staff—keenest rates.—BROOKLANDS SCHOOL OF FLYING, Brooklands, Byfleet.

AIRCRAFT BADGES 2/- each cash, or 2/6 c.o.d. Stipulate fastening stud or clasp.—Write, AERO HIRE, LTD., 39, Corporation Street, Birmingham. Midland 4834.

HELP TO ADVERTISE FLYING.

EAR DEFENDERS.

PREVENT injury due to excessive noise or change of pressure; small sounds heard as usual. Price, by post, 4/2 per pair.—THE MALLORY-ARMSTRONG CO., 39, Victoria Street, S.W.1. (NEW ADDRESS).

MODELS AND PARTS.

A. E. JONES, LTD. The Original House for Model Aeroplanes and Accessories; Quality always of the highest standard. Price List free.—97, New Oxford Street, London, W.C.1. Tel.: Museum 4090.

PETROLMOTOR CASTINGS, partly machined, $\frac{1}{2}$ horsepower. 9/9 a set. Catalogue 3d.—MADISON MOTORS, Wade Street, Littleover, Derby.

THE PARLIAMENT HILL MODEL AERO-PLANE CLUB holds at Parliament Hill, Hampstead (weather permitting), Wednesday evenings and Sunday mornings, Flying Exhibitions, all types of models. Colonial and Provincial visitors will find these meetings of exceptional interest if interested in Model Aeronautics.—HON. SECRETARY, 48, Narcissus Road, West Hampstead, N.W.6. Phone: Hampstead 8363.

AIR SURVEY.

THE AIRCRAFT OPERATING CO., LTD., 8, New Square, Lincoln's Inn, London (Holborn 8131), and Bulawayo, Southern Rhodesia; Cairo, Egypt; Rio de Janeiro, South America. Contractors to the Ordnance Survey. Laboratories and Subsidiary Company for aerial photography in the British Isles, AEROFILMS LTD., Colindale Avenue, Hendon (Colindale 6581).

AIR SURVEY CO., LTD., 39, Grosvenor Place, S.W.1 (Sloane 6048), Dum Dum, Calcutta, and Monkey Point, Rangoon.

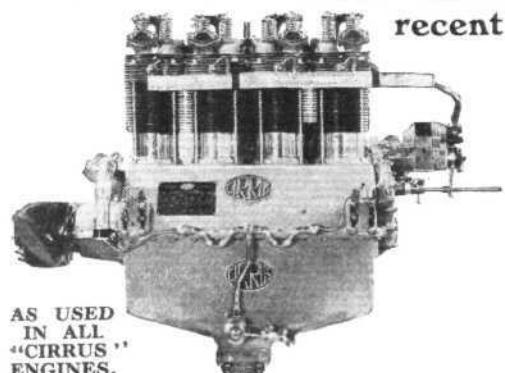
FOR SALE.

COLEY LTD., AIRCRAFT SURPLUS. Aeroplane Landing Wheels, new Palmer Cord Tyres, and Tubes, 700 x 75 mm., set two wheels and axle complete, 50/-, carriage forward. K.L.G. F9 Plugs, new, in maker's boxes, doz., 9/9. Ogilvie Airspeeds, pressure heads complete, new, 8/3. Smith's Indicators, 600-2600 revs., 3 ft. drive, 22/6. Cross Levels, 1/6. Dashboard New Spot Lamps, 2 volt, length of wire, 1/9. Above postage paid. Free list obtainable.—COLEY, LTD., Ordnance Works, Queen Elizabeth Road, Kingston-on-Thames. Phone: 0365.

WE.965

SPECIAL HEAT RESISTING
VALVE STEEL
for
INTERNAL COMBUSTION ENGINES

As used by Hinkler in his "Cirrus" Engine on his Australian Flight.



AS USED
IN ALL
"CIRRUS"
ENGINES.

The most efficient Valve Steel introduced during recent years.

1. It forges and machines quite well.
2. The heat treatment is very simple.
3. It retains a high tensile value at high temperatures.
4. Withstands rigorous thermal changes without any detrimental effects.
5. It will not harden under any conditions, and is therefore never brittle.
6. It is very tough at all temperatures and under all conditions.
7. It resists erosion by exhaust gases to a remarkable degree.

KAYSER ELLISON & CO., LTD.
CARLISLE STEEL WORKS,
SHEFFIELD.

ESTABLISHED OVER 100 YEARS.

MISCELLANEOUS ADVERTISEMENTS.

Advertisements for this column should arrive at this office by **Tuesday, 12 o'clock noon**, to insure insertion. Special PREPAID Rate:—

18 WORDS or less, 3/-, then 2d. per word.

Display Caps Throughout, 1/6 per line.
Situations Wanted ONLY, 18 Words, 1/6.
1d. per word after.

All Advertisements to a Box No. 1/- per insertion extra.

AVIATION INSURANCE.

COME AND SEE US at the Aero Exhibition, Olympia, Stand No. 26—C.—BRAY, GIBB & CO., LTD., 166, Piccadilly, London, W.1.

CONSULTANTS.

THE Design and Production of "Lighter-than-Air" craft is a speciality of THE AIRSHIP DEVELOPMENT CO., LTD., 39, Victoria Street, S.W.1. Aeronautical Engineers and Consultants. Telephone: Victoria 6521/2 (two lines).

PATENTS.

A. P. THURSTON, D.Sc., M.I.Mech.E., M.I.A.E., F.R.Ae.S.

PATENTS, Trade Marks and Designs.—Bank Chambers, 329, High Holborn, W.C.1. Holborn 2542.

STANLEY, POPPLEWELL & FRANCIS, Chartered Patent Agents, Jessel Chambers, 88, Chancery Lane, London, W.C.2. Telephone: Holborn 6393; Telegrams: "Notions, London."

SCHNEIDER CUP.

FOR SALE OR HIRE, Cabin Cruiser, 28' 0" by 8' 0" beam, electric light, W.C., good week-end vessel.—Apply, F. GILBERTSON, 12, Wharncliffe Road, Southampton.



TRIPLEX SAFETY GLASS CO., LTD., 1, ALBEMARLE ST., LONDON, W.1

HANGARS

PORTABLE or PERMANENT
GARAGES,
OFFICES,
STORES, etc.

PLANS & ESTIMATES
for
GENERAL EQUIPMENT.

Aerodrome Construction & Equipment Co.
3 & 4, Clement's Inn, London, W.C.2.
Telephone: Holborn 0386.

AIRCRAFT WANTED.

MODERN AIRCRAFT Purchased for Cash. Part exchanges for new machines.—BROOKLANDS SCHOOL OF FLYING, LTD. Telephone: Byfleet 437.

MARK I MOTH, any condition, for cash.—BROOKLANDS SCHOOL OF FLYING, Byfleet. Tel. 436-7.

IRCRAFT purchased for cash, part exchange, or deferred terms.—PHILLIPS & Powis AIRCRAFT (READING), LTD., Reading Aerodrome. 'Phone: Sonning 114.

MACHINES & ENGINES FOR SALE.

ERO ENGINES FOR SALE. Rolls Royce Eagle VIII, £100; Beardmore 160 h.p., £60; Sunbeam Arab, £55; Hispano 220 h.p., £65. All overhauled as new.—C. B. G., 19, Hillcrest Road, Acton, W.3. Telephone: Chiswick 4996.

SIX Bristol Jupiter advanced training machines, without engines, all in first-class condition, also spares for same, can be obtained at very moderate prices.—Inquiries and offers to be addressed FLYING SCHOOL, Moorpark Aerodrome, Renfrew.

IRCRAFT FOR SALE.—Three-seater Avro Joy-rider. Twelve months' C. of A. £195. Delivery three weeks.—BROOKLANDS SCHOOL OF FLYING, Brooklands Aerodrome, Byfleet.

MISCELLANEOUS.

IRCRAFT REPAIRS. No job too small or too large. Complete reconditioning for C. of A. Full certificated staff—keenest rates.—BROOKLANDS SCHOOL OF FLYING, Brooklands, Byfleet.

AVIATION BADGES 2/- each cash, or 2/6 c.o.d.* Stipulate fastening stud or clasp.—Write, AERO HIRE, LTD., 39, Corporation Street, Birmingham. Midland 4834.

HELP TO ADVERTISE FLYING.

EAR DEFENDERS.

PREVENT injury due to excessive noise or change of pressure; small sounds heard as usual. Price, by post, 4/2 per pair.—THE MALLON-ARMSTRONG CO., 39, Victoria Street, S.W.1. (NEW ADDRESS).

MODELS AND PARTS.

A. E. JONES, LTD. The Original House for Model Aeroplanes and Accessories; Quality always of the highest standard. Price List free.—97, New Oxford Street, London, W.C.1. Tel.: Museum 4090.

PETROLMOTOR CASTINGS, partly machined, $\frac{1}{2}$ horsepower. 9/9 a set. Catalogue 3d.—MADISON MOTORS, Wade Street, Littleover, Derby.

THE PARLIAMENT HILL MODEL AERO-PLANE CLUB holds at Parliament Hill, Hampstead (weather permitting), Wednesday evenings and Sunday mornings, Flying Exhibitions, all types of models. Colonial and Provincial visitors will find these meetings of exceptional interest if interested in Model Aeronautics.—HON. SECRETARY, 48, Narcissus Road, West Hampstead, N.W.6. 'Phone: Hampstead 8363.

AIR SURVEY.

THE AIRCRAFT OPERATING CO., LTD., 8, New Square, Lincoln's Inn, London (Holborn 8131), and Bulawayo, Southern Rhodesia; Cairo, Egypt; Rio de Janeiro, South America. Contractors to the Ordnance Survey. Laboratories and Subsidiary Company for aerial photography in the British Isles, AEROFILMS LTD., Colindale Avenue, Hendon, (Colindale 6581).

AIR SURVEY CO., LTD., 29, Grosvenor Place, S.W.1 (Sloane 6048), Dum Dum, Calcutta, and Monkey Point, Rangoon.

FOR SALE.

COLEY LTD., AIRCRAFT SURPLUS. Aero-plane Landing Wheels, new Palmer Cord Tyres, and Tubes, 700 x 75 mm., set two wheels and axle complete, 50/-, carriage forward. K.L.G. F9 Plugs, new, in maker's boxes, doz., 9/9. Ogilvie Airspeeds, pressure heads complete, new, 8/3. Smith's Indicators, 600-2600 revs., 3 ft. drive, 22/6. Cross Levels, 1/6. Dashboard New Spot Lamps, 2 volt, length of wire, 1/9. Above postage paid. Free list obtainable.—COLEY, LTD., Ordnance Works, Queen Elizabeth Road, Kingston-on-Thames. 'Phone: 0365.

Save time by using the Air Mail.

CLOTHING.

No Connection with any other Firm,
S. LEWIS'S.—The Old Firm of Flying-Racing
S. and Motor Clothing Fame, 19 and 27, Carburton
Street, London, W.1. We wish our Thousands of
Customers to know we have no connection with any
other Firm. Flying Helmets, best Quality Fur
trimmed, 14s. 6d., 12s. 6d.; All Leather Lined
Chamois, 10s. 6d., 12s. 6d.; Flat Type Phones, 5s.;
Metallic Tubing and Rubber Connection, 2s. 6d.;
V Piece and Adapter combined, 3s. 3d.; White
Flying Suit, 25s. 6d.; Ditto, with Lightning
Fasteners, 35s.; White Combination Suit, 14s. 6d.;
White Flying Helmet, 6s. 6d.; Featherweight type
Goggles, fitted genuine Triplex Lenses, slightly
tinted, new W.D., 7s.; Ditto, fitted genuine clear
Triplex Lenses, 11s.; Aviation Mask Goggles, fitted
genuine Tinted Triplex Lenses, 14s. 6d.; Ditto, fitted
Tinted Triplex, 12s. 6d.; Meyrowitz Luxor Goggles,
fitted with Triplex Unsplintered Lenses, 40s.; R.A.F.
Scarf, 5s. 6d. each; Pilot's Gauntlets, 12s. 6d. per
pair; Suede Golf Jacket, best quality, ideal for
flying, 50s. We are contractors to Foreign and
Colonial Governments.—S. LEWIS'S, 19 and 27,
Carburton Street, London, W.1.

No Connection with any other Firm.

WAINWRIGHT'S FLYING EQUIPMENT.—
Wainwright Flying Helmet (passed by A.M.),
lined chamois, 22/6, in Black or Tan. Fur-trimmed
helmets, 12/6, 15/6. White helmets, pique or drill,
12/6. Flat-type earphones complete with connec-
tions and "Y" pieces, 12/6. Flying-mask goggles,
clear or anti-dazzle, 12/6. Genuine R.A.F. Sidcots,
57/6. Chrome leather flying coats, 84/- to £8 8s.—
Write for Catalogue, WAINWRIGHT'S, 300-302, Euston
Road, London, N.W.1. Phone: Museum 6280.

Established over 30 years.
The Leading House for

AVIATORS' CLOTHING.

Fine quality R.A.F. pattern Chrome Leather Coats,
fleece lined, 105/-, 120/-. Other styles from 77/6.
Flying Suits with fur collar, all sizes, 60/-. White
Flying Suits, 25/-, Ditto, super quality, with zip
fastener, 30/- & 35/-. Mask Goggles, fur lined, 12/6.
Featherweight Goggles, fitted genuine Triplex, 7/6.
Genuine R.A.F. Flying Gloves with lambs' wool
pouch, 12/6. Flying Helmets, 12/6, 14/6. Approved
Air Ministry pattern Helmet, perfect fit assured,
best quality leather, chamois lined, 22/6. Genuine
D.H. Phones, 12/6. Finest Sheepskin Flying
Boots, lambs' wool lined, zip fastener, 45/- & 63/-.

Write for Illustrated Catalogue, Free.
Goods on 7 days' approval against cash or C.O.D.

D. LEWIS,

(Dept. F), 124, Gt. Portland St.,
London, W.1. Phone: Museum 4314.
Branches at BIRMINGHAM, LIVERPOOL & SHEFFIELD.

SITUATIONS VACANT.

THE WESTLAND AIRCRAFT WORKS, Yeovil,
have vacancies for Aircraft Fitters and Erectors,
also Tool Makers used to Press Work. Capable men
can be assured of continuous work at the District
Rate plus Production Bonus.—Apply personally or
by letter, with age and experience, to LABOUR CLERK,
as above.

REQUIRED. Engine Inspector for Aircraft
Factory. Must be conversant with all up-to-
date types of engines. "C" licence essential.—
Apply, stating experience, age and salary required,
to Box No. 1734, c/o FLIGHT, 36, Great Queen Street,
Kingsway, London, W.C.2.

URGENTLY required; "B" Pilot, also Ground
Engineer and Mechanic, for Le Rhone Avro
seaside joy-rides.—Box No. 1738, c/o FLIGHT, 36,
Great Queen Street, London, W.C.2.

GROUND ENGINEER, certificated, required at
once for The Scottish Flying Club.—Apply,
SECRETARY, Moorpark Aerodrome, Renfrew.

ENGINEERS.—Information unobtainable else-
where concerning all professional examinations,
and enabling you to recognise readily the qual-
ification that will most benefit YOU, such as—
A.M.I.Ae.E., A.M.I.Mech.E., A.M.I.E.E., A.M.Inst.
B.E., Ground Engineers, etc., together with nearly
200 Courses—the widest selection of Engineering
Correspondence Courses in the world—are in the
MAGNIFICENT NEW 112-PAGE BOOK,

"THE ENGINEER'S GUIDE TO SUCCESS." This great book is available to you just at a time when a revolutionary change in promotion conditions has taken place throughout engineering—a change that gives to engineers the greatest chance they ever have had to attain to worth-while posts and equally worth-while pay. Get this Book—the Key to certain advancement in modern-day engineering; write NOW for FREE copy. The T.I.G.B. Guarantees Training until Successful.—THE TECHNOLOGICAL INSTITUTE OF GREAT BRITAIN (Established 1917), 248, Temple Bar House, London, E.C.4.

ALAN COBHAM AVIATION LTD.

150, New Bond Street, W.1.

'Phone: Mayfair 2908. 'Grams: "Talsundar, London." Surveys conducted for Municipal authorities and commercial undertakings. In addition to choosing the best possible site, we prepare a layout and can contract for complete equipment.

AERODROME CONSULTANTS.**AIRCRAFT CAMERAS.**

"EAGLE" Aircraft Cameras and Equipment
Specialists in Air Photographic Apparatus. Full
particulars from the manufacturers and patentees,
WILLIAMSON MANUFACTURING CO., LTD., Litchfield
Gardens, Willesden Green, London, N.W.10. 'Phone:
0073-4 Willesden. 'Grams: "Kinetogram, Willroad,
London." Contractors to the Admiralty, Air Ministry,
War Office.

AVIATION BOOKS.

"Duralumin," By LESLIE AITCHISON ... 7d.
("Flight" Library—Vol. II.) Post Free

"International Aircraft Markings, Naval, Military and Civil," ... 2/9
(Illustrated in Colour.) Post Free

"The ABC of Flying," By LT.-COL. W. LOCKWOOD MARSH, M.A. ... 2/9
Post Free

"Pilot's 'A' Licence," By JOHN F. LEEMING ... 3/9
Post Free

"Aerobatics," By MAJOR OLIVER STEWART, M.C. ... 5/4
Post Free

"The Art of Flying," By CAPTAIN NORMAN MACMILLAN ... 5/6
Post Free

"The Strategy and Tactics of Air Fighting," By MAJOR OLIVER STEWART, M.C. ... 6/6
Post Free

"Dick Bird, Air Explorer," A Book for Boys By FITZHUGH GREEN ... 6/6
Post Free

"Learning to Fly," By FRANK A. SWOFFER, M.B.E. ... 8/-
A course of elementary flying instruction. Post Free

"ABC of Flight," By W. LAURENCE LE PAGE ... 8/-
Post Free

"War Birds," The Diary of an Unknown Aviator. ... 8/-
Post Free

"Above the Bright Blue Sky," (More about the War Birds.) By E. W. SPRINGS ... 8/-
Post Free

"The Law in Relation to Aircraft," By LAWRENCE ARTHUR WINGFIELD, M.C., D.F.C., and REGINALD BRABANT SPARKES, M.C. ... 13/-
Post Free

"Twenty-five Years of Flying," By HARRY HARPER ... 13/-
Post Free

"The Baghdad Air Mail," By RODERIC HILL, M.C., &c. ... 18/6
Post Free

"Airplane Design & Construction," By POMILIO ... 25/6
Post Free

All above are obtainable upon application to :
"FLIGHT" Office,
36, Great Queen Street, Kingsway, W.C.2.

"Motor Car Mechanism, Management and Overhauling," By SHEPHERD ... 2/9
Post Free

"Flight" Office, 36, Gt. Queen Street, W.C.2.

FLIGHT PHOTOGRAPHS.

"FLIGHT" (Copyright) PHOTOGRAPHS. Black and White, Glossy, Unmounted: 6s x 4s, 1/6; 8s x 6s, 2/6; 10 x 8, 3/6; 12 x 10, 4/6; 20 x 16, 10/6. Double Thickness, Cream Base, Sepia Toned, Unmounted: 10 x 8, 6/0; 12 x 10, 7/6; 20 x 16, 21/0.

Hand Coloured, in Oils (Grey Mount): 20 x 15 (Mount 24 x 19), 31/6.

FLIGHT OFFICE, 36, Great Queen Street, W.C.2
Holborn 3211.

AIR TAXIS.

AIR TAXIS, LTD., Stag Lane Aerodrome; Edgware. Phone: Colindale 6807.

EROFILMS LIMITED: Aerial Tours, Taxi Work, Aerial Photography, Air Survey. Colindale Avenue, Hendon, N.W.9. 'Phone: Colindale 6581 (2 lines).

FLIGHT TUITION.

LEARN TO FLY AT THE MIDLAND AERO CLUB. Four tuition machines, two fully qualified expert Instructors. No waiting.—Particulars, HON. SECRETARY, 22, Villa Road, Handsworth, Birmingham.

BROOKLANDS SCHOOL OF FLYING employs three pilots who have been instructing since 1916. Take advantage of their experience and let them teach you on a Moth or Avro. Private accommodation on the Aerodrome, which is only 50 minutes by rail or road from Waterloo. 'Phone: Byfleet 436-7. Visit our Stand No. 180 at Olympia.

PHILLIPS & POWIS SCHOOL OF FLYING, Reading Aerodrome. Tuition on Moths. Moderate rates. 'Phone: Sonning 114.

THE DE HAVILLAND SCHOOL OF FLYING, Stag Lane Aerodrome, Edgware, Middlesex. Fourteen machines: Nine Moths, five advanced training machines. Seven Pilot Instructors, Lecture Classes, Restaurant and Recreation Pavilion. The largest and most up-to-date civilian organisation for flying tuition in the British Empire.

CINQUE PORTS FLYING CLUB (Subsidised) gives cheapest Tuition ever offered. Special monthly sub., 21/- for 28 days (no Entry Fee)—Annual Sub. 63/- (Entry Fee, 21/-). Moth aircraft. Club Room, Bar and Lawn. Perfect aerodrome near Folkestone, 1½ car hours from West End. No waiting list.—Write, SECRETARY, Hythe, Kent.
LEARN AT LYMPNE.

SURREY FLYING SERVICES, Croydon Aerodrome (Telephone: Croydon 1736), have vacancies in their Flying School for Pupils at Moderate Rates. Avro Aircraft used. Residential accommodation at Aerodrome Hotel.

TUITION.

WE offer sound instruction in Aeroplane Design, Fitting and Rigging, and Aero-Engine Fitting and Rigging; also expert training for Ground Engineers (Categories A, B, C and D) and Special Pilots (Licence B). Write to-day for our "Aeronautical Engineering" Booklet.—INTERNATIONAL CORRESPONDENCE SCHOOLS, LTD., 182, International Buildings, Kingsway, London, W.C.2.

TO BE LET.

At N.E. Corner of Heston Air Park.
TO BE LET. Unfurnished, Western Suburb, modern residence, 2 reception, 6 bed and dressing rooms, bath-room (h. & c.). Country surroundings, nice garden. GARAGE. Rent £120 per annum, incl.—Apply, HENRY LITTLE, F.S.I., 2, Moorgate Buildings, E.C.2.

BULL'S RUBBER CO., LTD.

Dunlop, Michelin, Pirelli
New or Second-hand.

SPECIAL CLEARANCE LINES.

Note Address,
3, Upper St. Martin's Lane, W.C.2.
Gerrard 1347.

SITUATIONS WANTED.

GENTLEMAN, 39 years of age, 22 years' driving experience of many makes of cars, clean licence, excellent references, good social standing, wishes to obtain post as companion-chapman to lady or gentleman. Continental touring or home driving. The advertiser holds a Pilot-aviator's licence.—Box No. 1724, c/o FLIGHT, 36, Great Queen Street, Kingsway, London, W.C.2.

DETAL DRAUGHTSMAN AND TRACER, 10 years in one firm, seeks situation, could take charge of Tracing Dept.—L. RATHCOOLE, London Road, Guildford, Surrey.

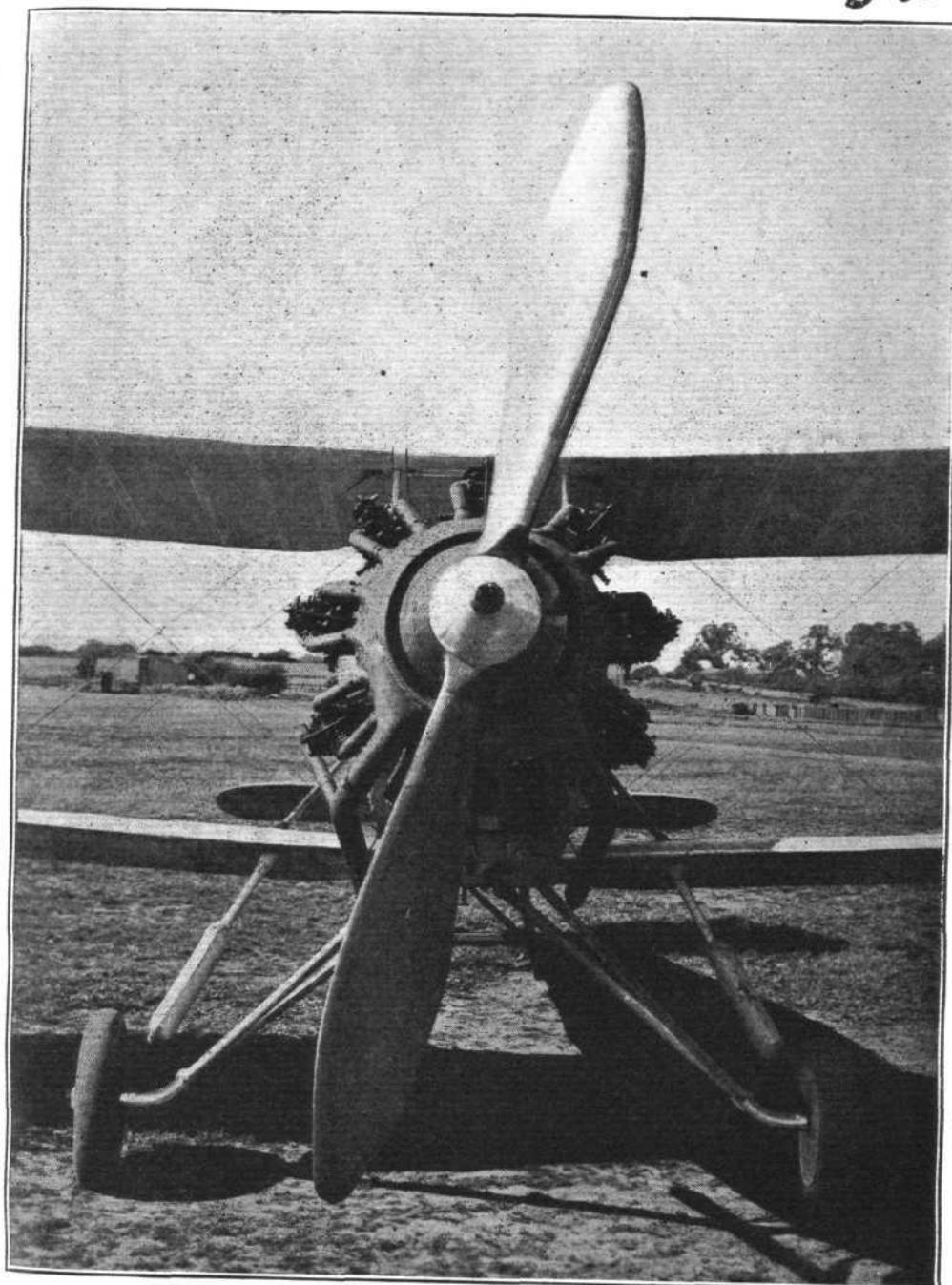
YOUTH seeks situation with owner-pilot or aerodrome. Willing to do anything.—CLARKE, 90a, Stapleton Road, Balham, S.W.

PILOT-INSTRUCTOR. 24. 500 hours. B Licence. B.I. at C.F.S. Speaks Spanish, go anywhere.—Apply, giving particulars, to Box 1743, c/o FLIGHT, 36, Great Queen Street, Kingsway, London, W.C.2.

*A 'Plane is as Reliable
and Efficient as its
Airscrew!*

**NO MORE!
NO LESS!**

**I
N
S
I
S
T
O
N
A
I
R
S
C
R
E
W
S**

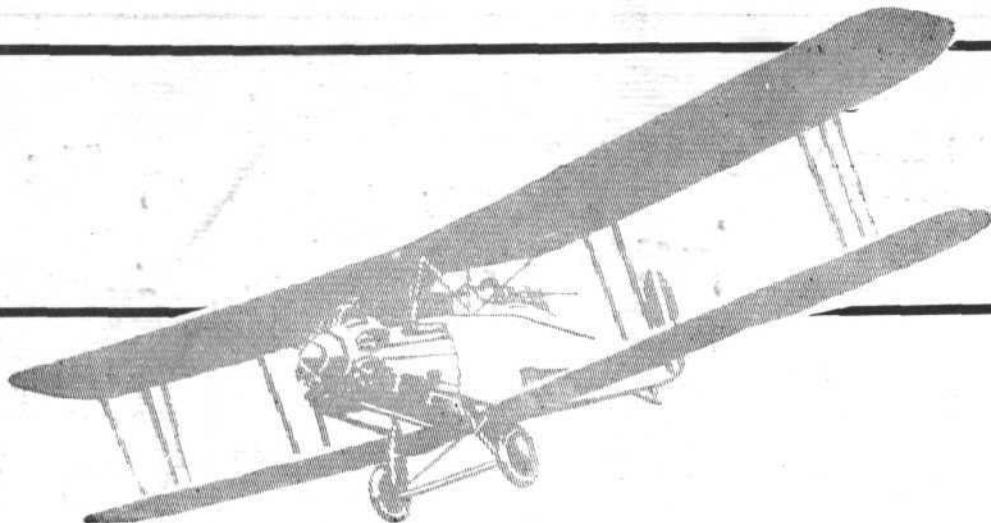


DE HAVILLAND "HOUND"—HOLDER of
Three WORLD'S RECORDS.

'Phone: WEYBRIDGE 705.



Save time by using the Air Mail.



"Bristol"

RADIAL AIRCOOLED AERO ENGINES

are designed in a complete range for every variety of aircraft—Military, Sporting and Commercial.

One feature is consistent throughout all types—the reliability under all conditions of service.

STAND 103.

INTERNATIONAL AERO EXHIBITION.

THE BRISTOL AEROPLANE CO., LTD.,
FILTON — BRISTOL.

Telegrams: "Aviation, Bristol."

Telephone: 3906 Bristol.